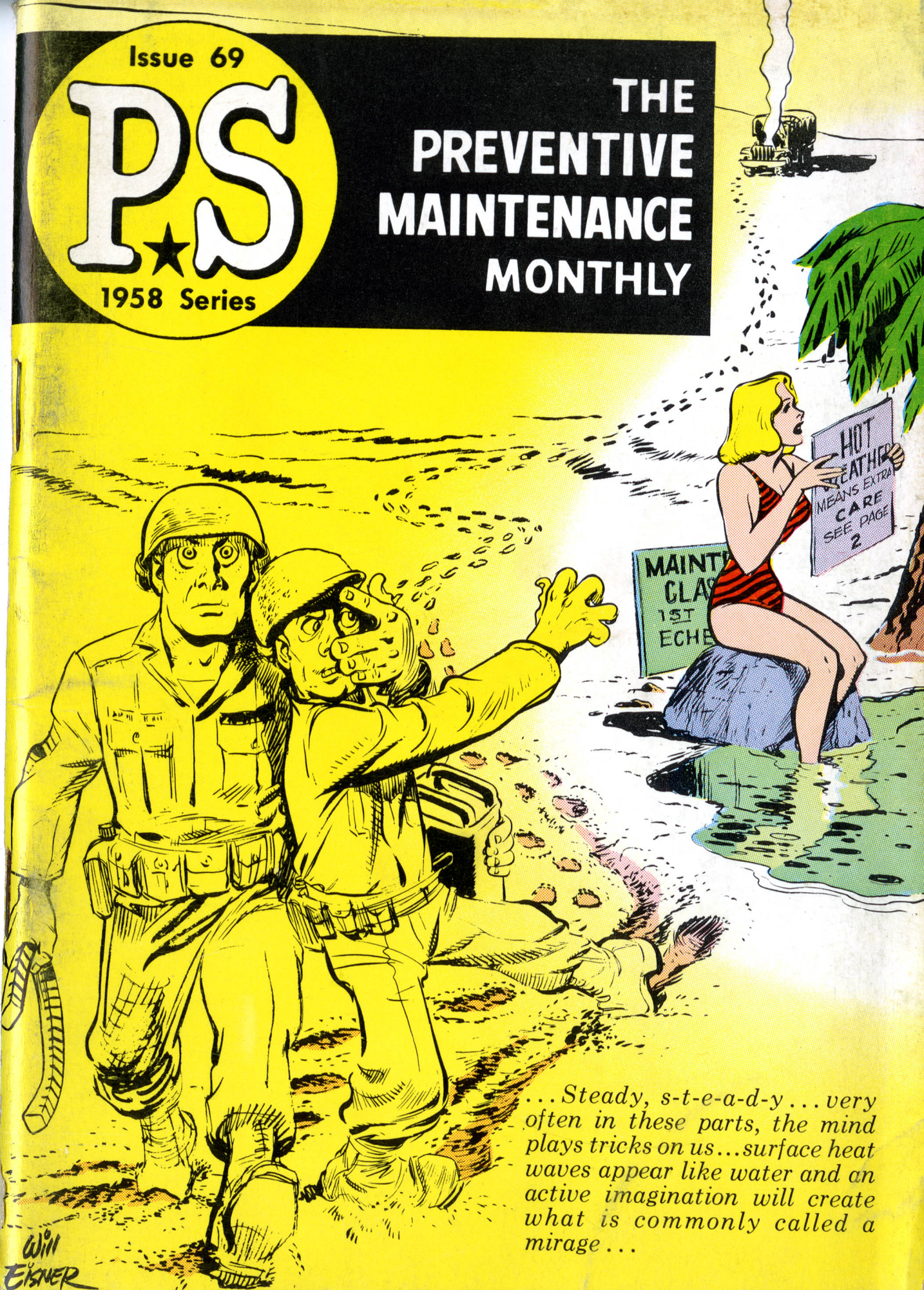
Issue 69

PS

1958 Series

THE PREVENTIVE MAINTENANCE MONTHLY

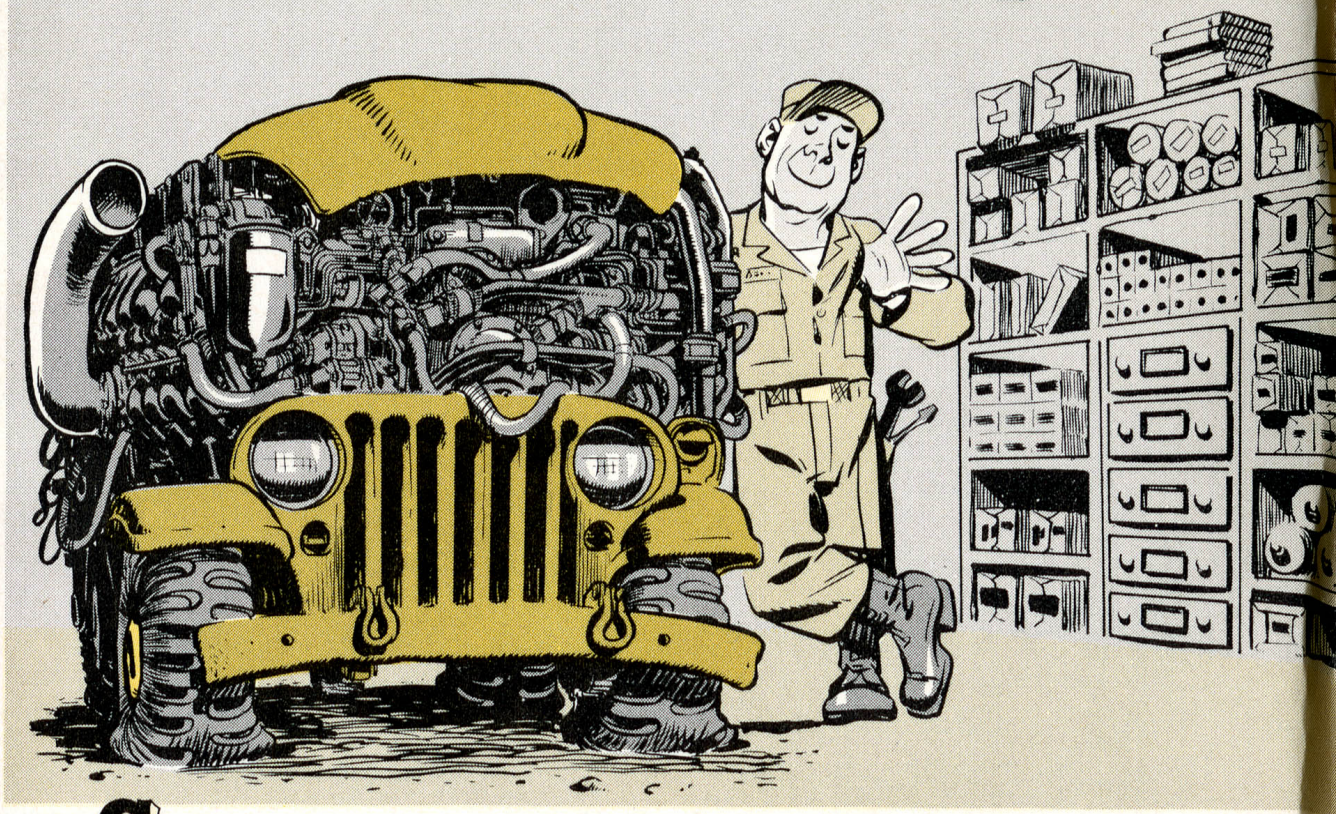


...Steady, s-t-e-a-d-y... very often in these parts, the mind plays tricks on us...surface heat waves appear like water and an active imagination will create what is commonly called a mirage...

Will Eisner

HALF-MAST TALKS—

PLEASE, NO HAYWIRE



Comes a war, you might have to use field fixes, jawbone repairs, haywire riggin's and so on—when they're the only thing you've got. In fact, your life may depend on bein' able to scrounge up whatever's at hand and make it get you rolling again.

And in peace time, applyin' a little of this same ingenuity is the only possible training for war.

But it's easy to carry things too far.

First, the technical support people take a dim view of free-hand fixing and changing on a truck which they may get back for repair or rebuild. A Caddy-powered Hydra-Matic Jeep would be mighty confusin' to service.

The other thing is, the supply people need training, too. They're always trying to iron out the bugs in their system so they can give you what you need the minute you need it. And you want to help 'em any way you can.

Well, believe it or not, if you make a substitution or an improvised repair that keeps your vehicle running, you may actually be doing more harm than good. In peace time, I mean. Because supply stocks are based on usage, and when you use any part you don't need to take the place of one you do need you louse up the record. So the next time you need it, it'll still be in short supply.

What do you do? Just this: As long as nobody's shooting at you, the very best thing you can do when you can't get a part vital to the safety or tactical needs of a vehicle or piece of equipment is to deadline it until you do get

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And you'd better give an extra special check on the second echelon maintenance on that vehicle to be sure that everything you are supposed to do has been done.

Then if the Old Man or the Post Commander starts breathing fire and slaughter because the truck's not ready to go, the scorch won't be on your britches.

And maybe the next time you requisition a part, you'll get an issue instead of a due-out.

So remember, keep the haywire handy for real emergencies, but deadline for lack of parts.

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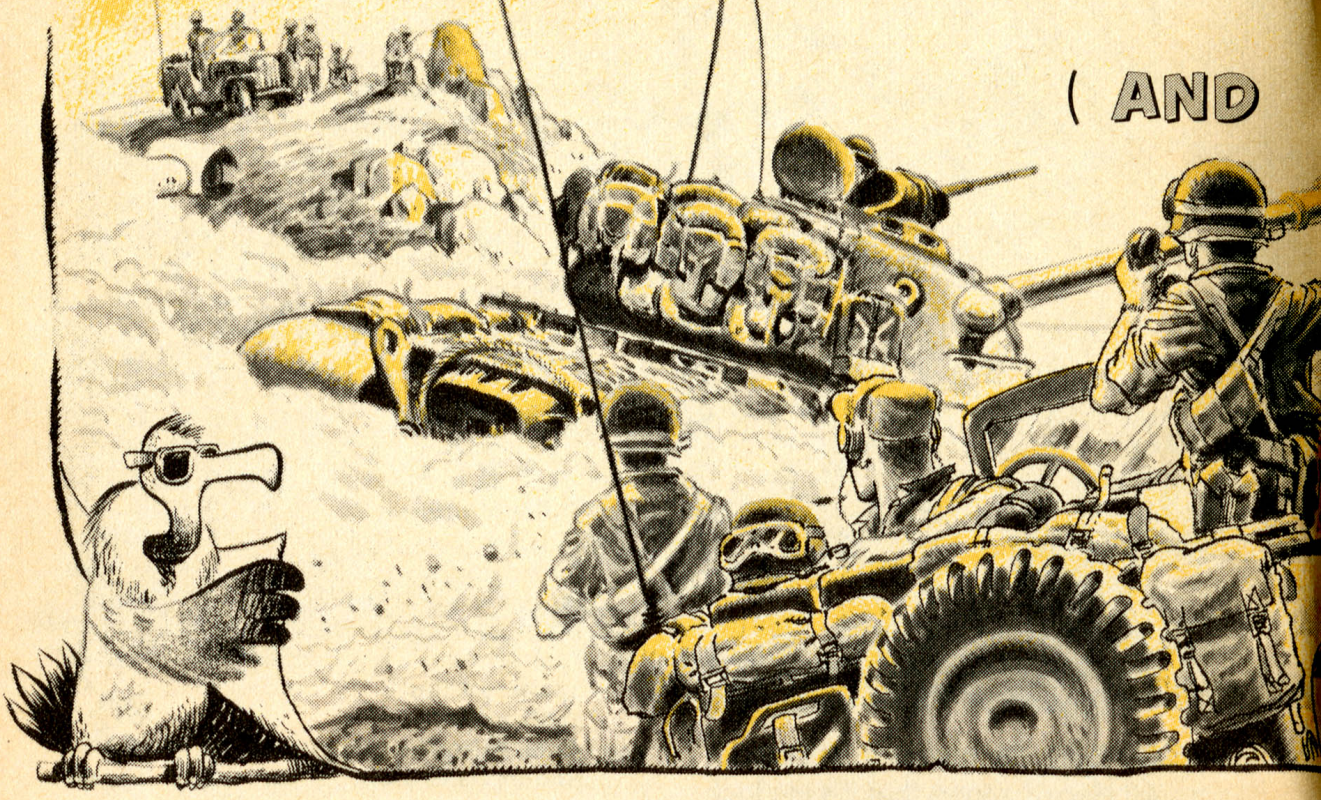
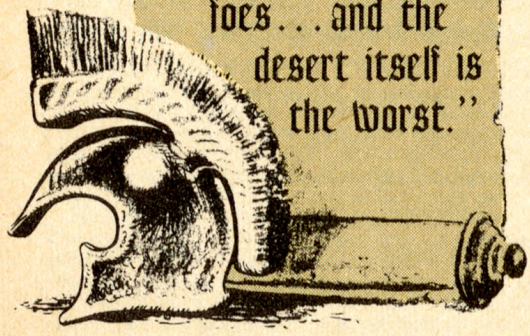
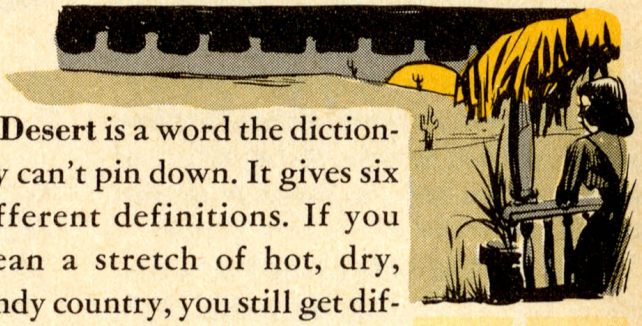
MAINTENANCE AND OPERATION WHERE IT'S HOT, (AND



"The fighting man in the desert needs fear two foes . . . and the desert itself is the worst."





Desert is a word the dictionary can't pin down. It gives six different definitions. If you mean a stretch of hot, dry, sandy country, you still get different descriptions. Tourists in air-conditioned motels call it "Beautiful." Tankers sweatin' it out on the ranges have a different word.

No matter what you call it, or how you look at it, a desert is a place that is hard on men and twice as hard on machines. Any weak spots will show up.

MAINTENANCE AND OPERATION

WHERE IT'S HOT, DRY AND SANDY

(AND SOMETIMES COLD)

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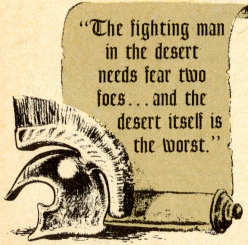

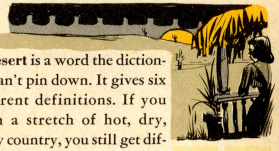

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First of all, let's pin down just what a desert is. It's a hot and dry area. Daytime temperatures go above 100 degrees.

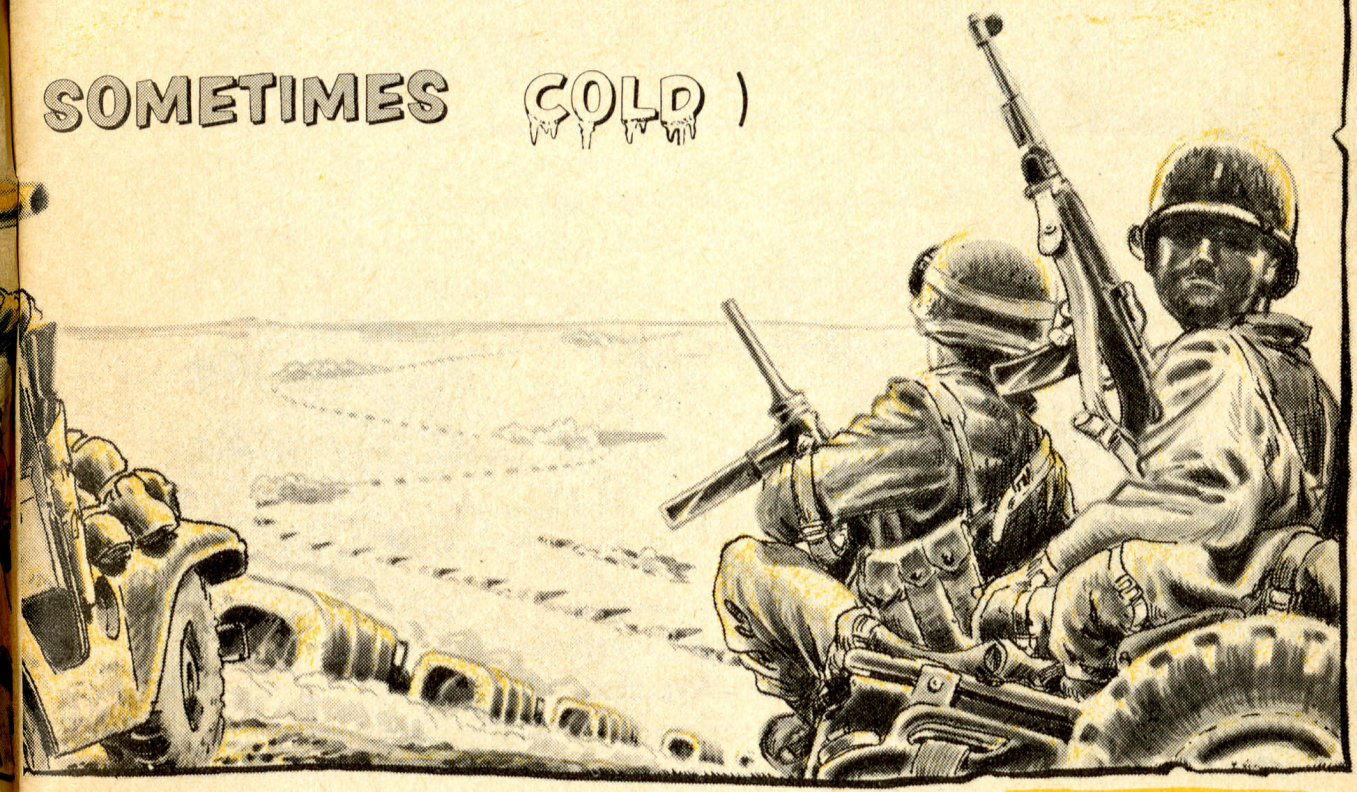
It's either sandy, rocky, or hard clay and usually a wide empty space with lots of dust and blowing sand. Then, just to be still more ornery, it sometimes gets real cold at night, even down to freezing. All of this is rough as a cob on both you and your equipment.

Maintenance takes on a new look real quick. Back in civilization, failure to keep your maintenance up will get you a chewing, and mebby a statement of charges. In the desert, neglect of your maintenance can get you a long walk back, and mebby make your life insurance payable.

To make matters worse, you've got a whole lot more maintenance to perform. Desert conditions affect practically everything you use, and call for special care in maintaining it.

DRY AND SANDY

SOMETIMES COLD!



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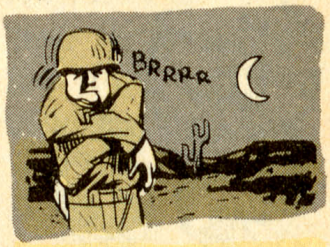

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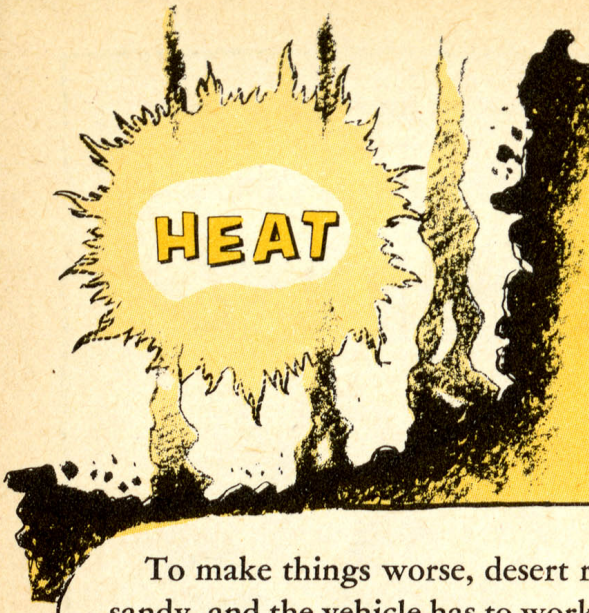
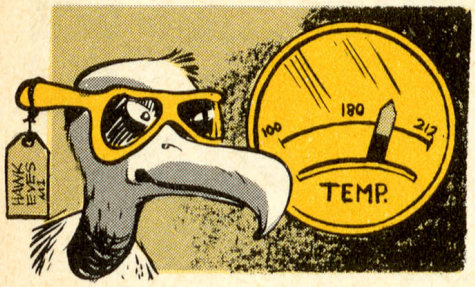
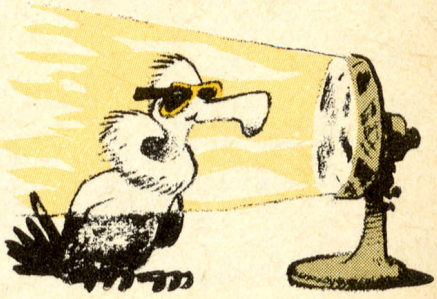


Heat—First of all, of course, you have the heat. This not only makes you miserable; it's hard on your equipment. Your vehicles' cooling systems, liquid or air, depend on transferring heat from the radiator or cooling fins to the stream of air from the fans. Naturally, the hotter this air is to begin with, the less heat it will absorb from the vehicle.

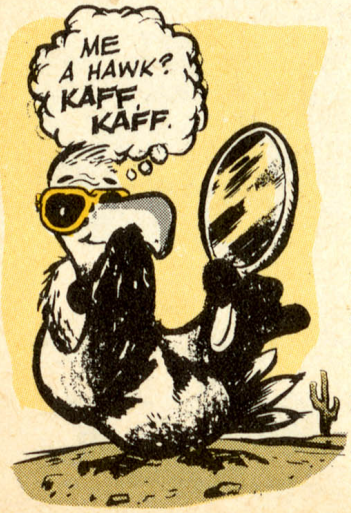
To make things worse, desert roads are frequently rough or sandy, and the vehicle has to work harder, often in lower gears, to make headway. All this adds up to the chance of overheating.



So you have to watch your temperatures like a hawk, and be prepared to pull over and cool your vehicle if they start up into the danger zone.

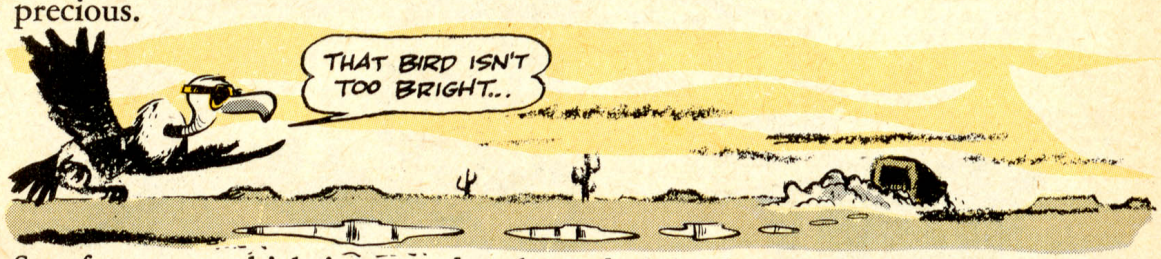


With tracked vehicles, you let the engine run at high idle to keep your cooling fans running. Wheeled vehicles should be headed up-wind if possible, to add the speed of the wind to the fan blast. If the tactical situation permits—shut your wheeled vehicle off and let it cool normally.

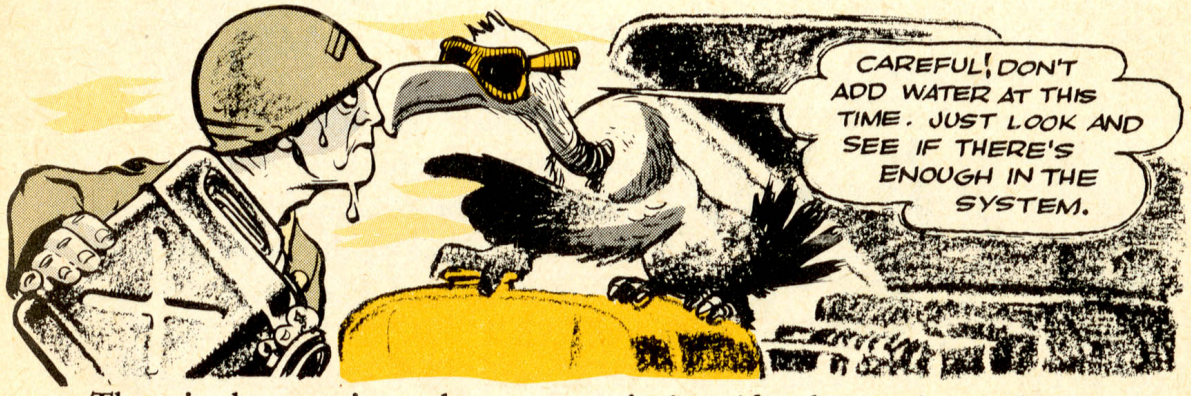


All of this means that your cooling systems must be in perfect shape, or they won't have a chance to keep you going in the heat. On your tracks, all you can do is keep the oil coolers clean and be sure all your fans are running right. (Of course, you make sure that no OVM, special equipment, cargo or riders are blocking the deck grills, either intake or exhaust.) On the wheeled vehicles, you check fan belts, and be sure the radiators are clean inside and out, and antifreeze is drained in accordance with the latest TB unless it is going below freezing at night—see your vehicle's TM.

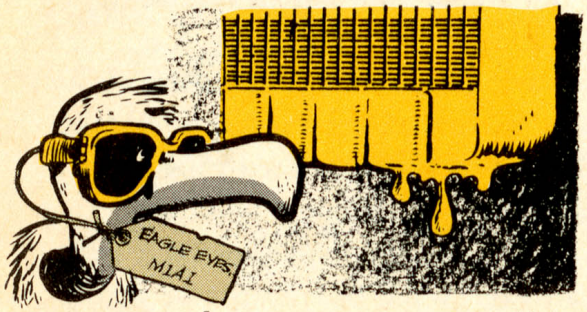
But, when filling a cooling system for desert operations, you've got to use your head. There's no sense in filling the radiator of a cold truck plumb up to the top. As the water heats and expands, you'll lose some of it, and water in the desert is precious.



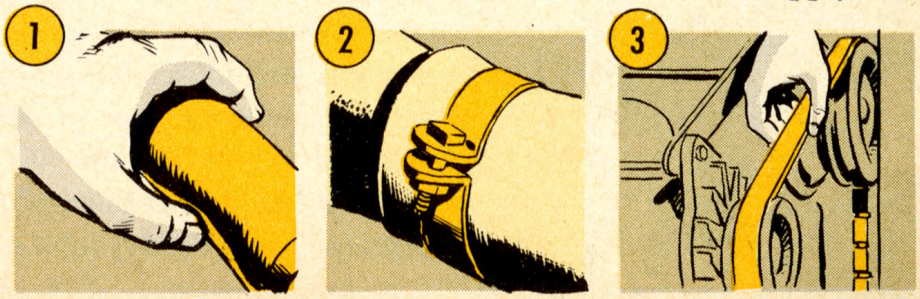
So, after your vehicle is stopped at the end of the day take a look at your water level just as soon as you're sure you can release the pressure cap without having the engine boil, and while the vehicle is still hot.



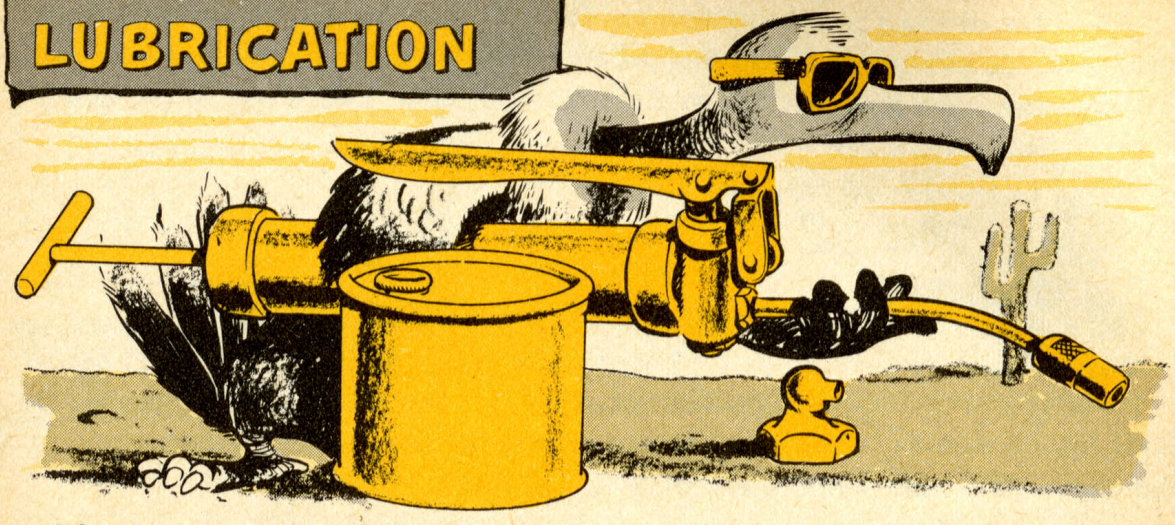
Then, in the morning, when your engine's cold, take another look. The water level you see with the engine cold is the level you want to keep. Adding water will just waste it. It may take you a few days to learn just where to stop filling, but it's worth it. (Some vehicles are tricky about this, so see your TM's.)



Another thing, between the rough going and the shortage of water, you must keep an eagle eye out for leaks in a liquid cooling system. A slow drip which wouldn't mean a thing in normal operation can be real serious in the desert. A leak which drips one drop every second amounts to seven gallons in 24 hours, and that is more than some cooling systems hold. This becomes critical if you're away from your supply. So keep that cooling system **tight**. Smart men check their hoses, hose clamps and fan belts at each halt.

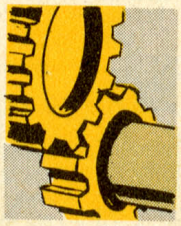


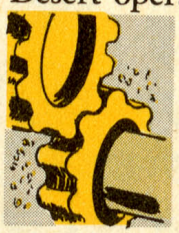
LUBRICATION



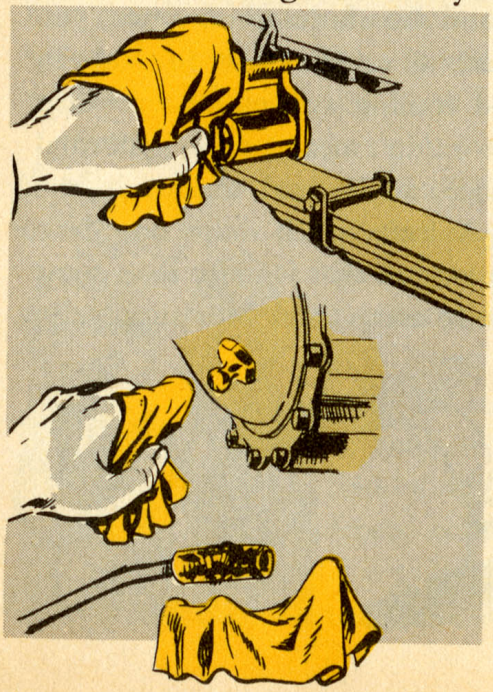
Of course, you'll make sure that your vehicle's lubricated with the right lubes, as called for in your LO, for hot-weather operation.

But, there's more to this. Desert operation is dusty operation, so you've got to be more careful in your greasing. A mixture of oil or grease with sand or dust makes one of the finest abrasives known. It's just like valve grinding compound.



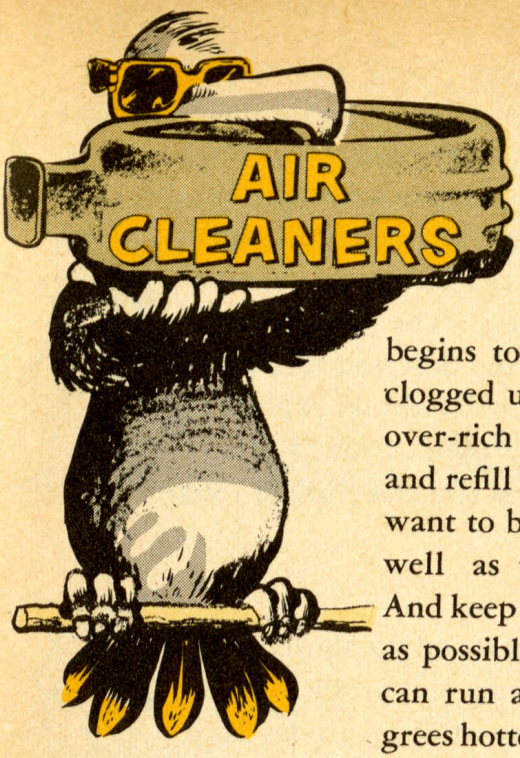


You can't prevent some sand and dust from getting into your grease, particularly on the universal joints and chassis grease points, but you can take steps to keep the grinding down. First of all, you can grease your truck more often, and so force clean grease in and dirty grease out of the joints. In real severe dust conditions it'll pay you to lube every day. But watch your clutch release lever shaft—don't force grease into your clutch housing.

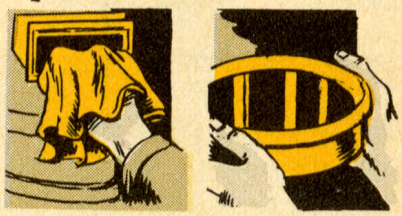


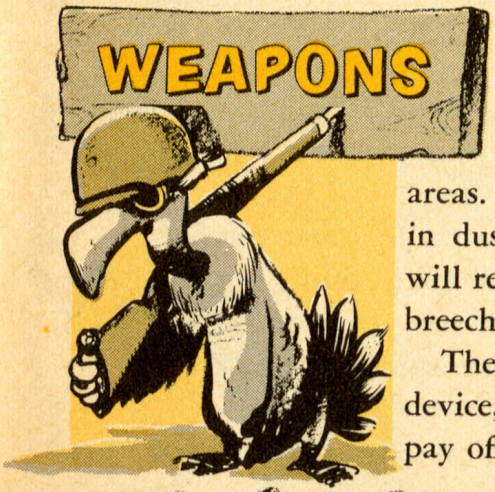
Extra greasing's not the whole answer. You can do more harm than good if you don't take every possible precaution to keep your grease, grease fittings and shackles and U-joints clean. Also your gear case breathers. Mostly it calls for a clean rag. Wipe off the grease fitting carefully before you grease it. Wipe the end of your grease gun, and also wipe off any excess grease, both from the fitting and from the shackle and joint after you grease it. The cleaner and drier your grease points are, the less dust they'll pick up.

Remember, the cleaner job you do, the less grinding compound you'll have sticking to your moving parts.



Air cleaners will need attention according to the dust conditions. Check 'em every day, and if the dust is bad, they may have to be cleaned at every halt. Remember, a dirty air cleaner'll not only come to a point where it begins to pass dust on into your engine, it'll also get clogged up to where it restricts the air flow, and causes over-rich mixtures, oil dilution and power loss. Be sure and refill air cleaner oil pans to the correct level. Tankers want to be sure to clean the tops of their air cleaners as well as the oil reservoirs. And keep your engines clean as possible — a dirty engine can run as much as 10 degrees hotter than a clean one.



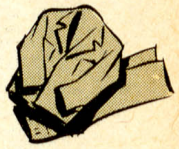


The only good thing about desert conditions is that you have little to worry about as far as rust is concerned. Which means that you can wipe your weapons drier than you'd dare keep 'em in wet areas. Any weapon will have to be cleaned far more often in dusty conditions, but keeping excess oil wiped off will reduce the accumulation of dust, particularly at the breech mechanism.

The use of a muzzle cover, or any other protective device, to keep dust out of your barrels and tubes will pay off.

Naturally you'll want to keep your boondockers and leather gear soft and flexible because desert conditions tend to dry and stiffen leather. However, neatsfoot oil and dubbing are too greasy, and will leave you with an accumulation of sand which is hard on the leather and hard on you. Saddle soap is your best answer. It'll keep the leather flexible without picking up grit.

On account of the shortage of water, there's not much chance of keeping your canvas equipment clean. But, sand ground into canvas will wear it out and cut threads real fast. The best you can do is shake, beat and sweep, getting rid of all the dust you can, particularly before folding a tent, f'r instance. Also, continual exposure to sun, sand and dust will dry the water repellent out of your canvas, so it'll need cleaning and re-waterproofing when you come out of the desert.



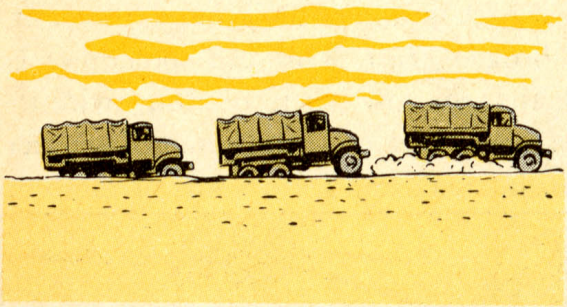
Between the heat and the shortage of water, you'll have a real problem with clothing; you'll sweat it up all day and shiver all night. O'course, you'll wash clothes when you can spare the water. When you can't, laying them out in the hot sun will dry 'em and deodorize 'em (some). Best you try to have a dried set of fatigues to climb into after sundown. And, like the canvas, your clothes'll last longer if you beat and shake as much dust outta 'em as you can.

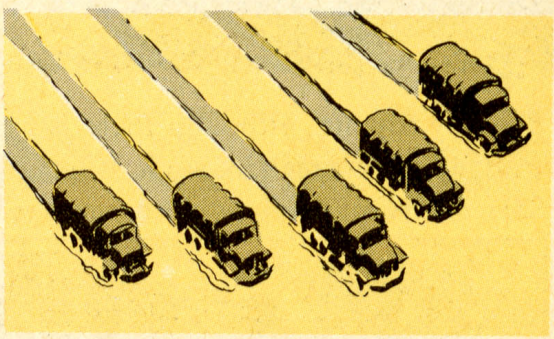
It's a revoltin' idea, the first time you try it, but it really works: cleanin' your mess gear in sand. When you have no water, you can get your eatin' tools clean by rubbin' 'em with lots and lots of sand. End up by wiping the sand out with a dry rag, and if the tactical situation allows it, set your gear out in the sun for a while. (But remember, a flash of sunlight on a mess kit can be seen for twenty miles.)

Driving on the desert presents problems you won't find anywhere else. (See FM 25-10) Most of it is off-the-road, and sometimes the surface is good, sometimes not. You'll find gravel, hard sand, dried mud pans, rock and deep sand. Sometimes you may even hit a sudden rainstorm, which gives mud and flash floods.

When the surface is hard, you have no more problem than you would on any dirt road, except that you've gotta keep an eye open for rocks and holes. But

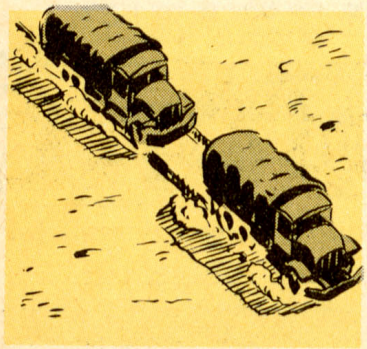
when you have soft sand under wheel, you'll have to be careful. Sometimes you'll find that the action of the wind has packed the surface of the sand to the point that it'll carry one or two vehicles on a sort of crust. Continued traffic, however, will break through and get stuck. In this case, you have to spread out your

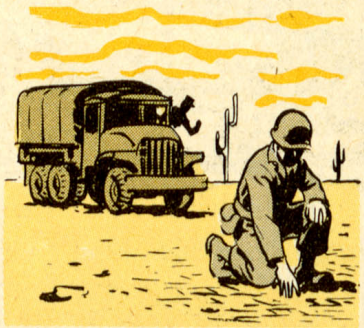


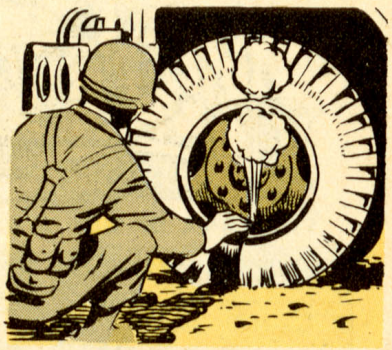


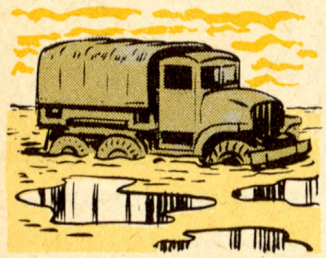
convoy, in echelon or line abreast, so that each vehicle crosses new ground. When you're driving on soft terrain—keep 'em rolling; use your momentum to carry you through.

In other cases, you may find conditions where the first vehicles pack loose sand by running over it, and you'll get best results by sending subsequent traffic up the tracks of the leaders. Only experience will tell you how best to meet changing ground conditions. Whenever you're in doubt, scout ahead on foot before taking a vehicle through. Lowering your tire pressure will give you better traction. But don't get 'em soft enough to ruin the tires. Avoid sharp turns in soft sand.



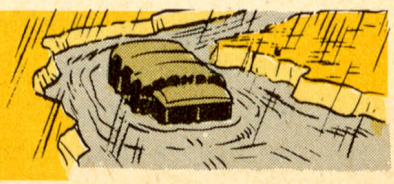


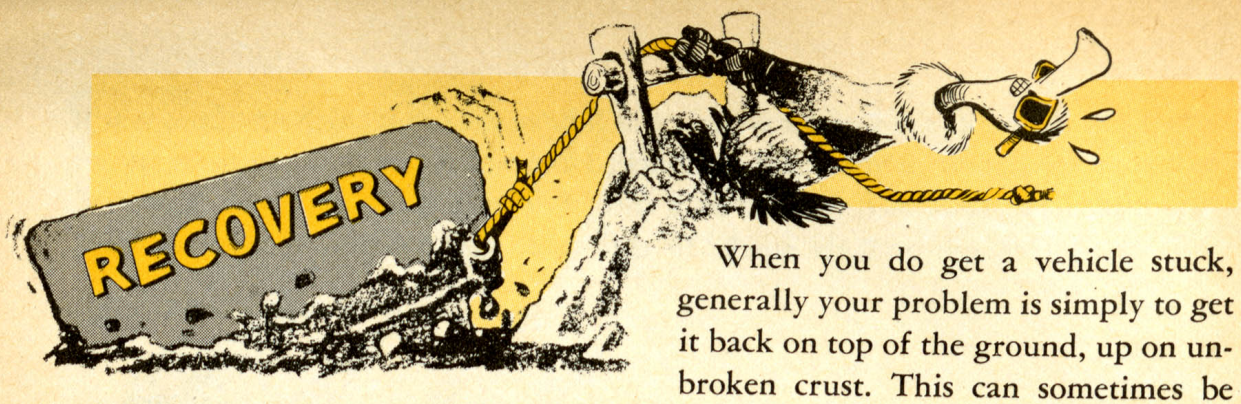




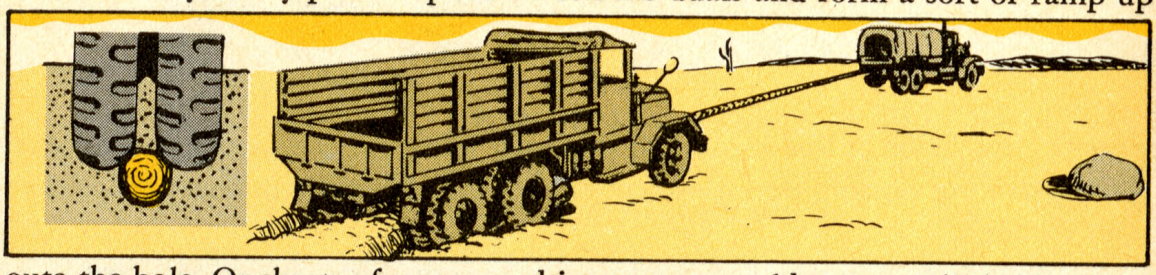
Rain is rare in desert areas, but brings you problems when it does fall. Your hard dry ground can turn into sticky goo fast. It'll only be wet for a day or so, but you can get stuck tight while it is wet. In wet times, stay on made roads or walk over the ground before you take out a vehicle.

CAUTION: WATCH OUT FOR FLASH FLOODS AFTER RAIN—GULLIES, DITCHES AND RIVER BEDS CAN BECOME RAGING TORRENTS WITHOUT WARNING — TAKE THE HIGH GROUND. AND BEWARE OF THUNDERSTORMS IN THE MOUNTAINS . . . FOR THE SAME REASON.

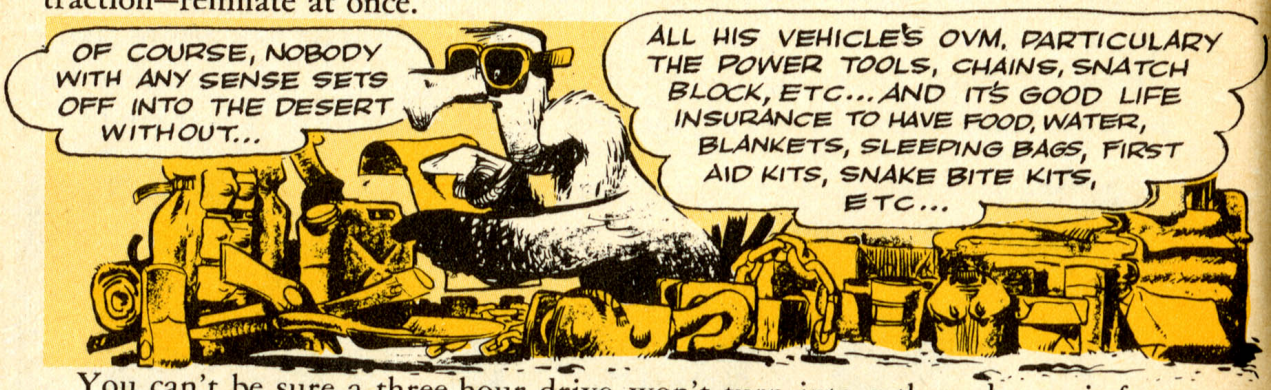




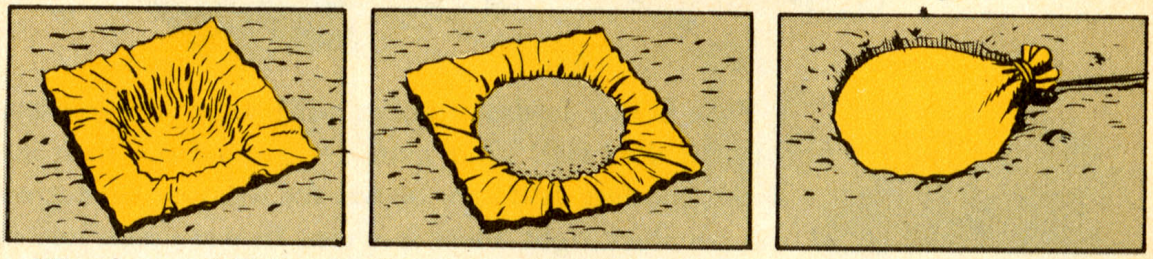
When you do get a vehicle stuck, generally your problem is simply to get it back on top of the ground, up on unbroken crust. This can sometimes be done by towing, although there is a risk that the tow truck, needing twice the pull, will also break through. Winching, from a truck on sound ground, is better. Smart convoys carry poles to put between the duals and form a sort of ramp up



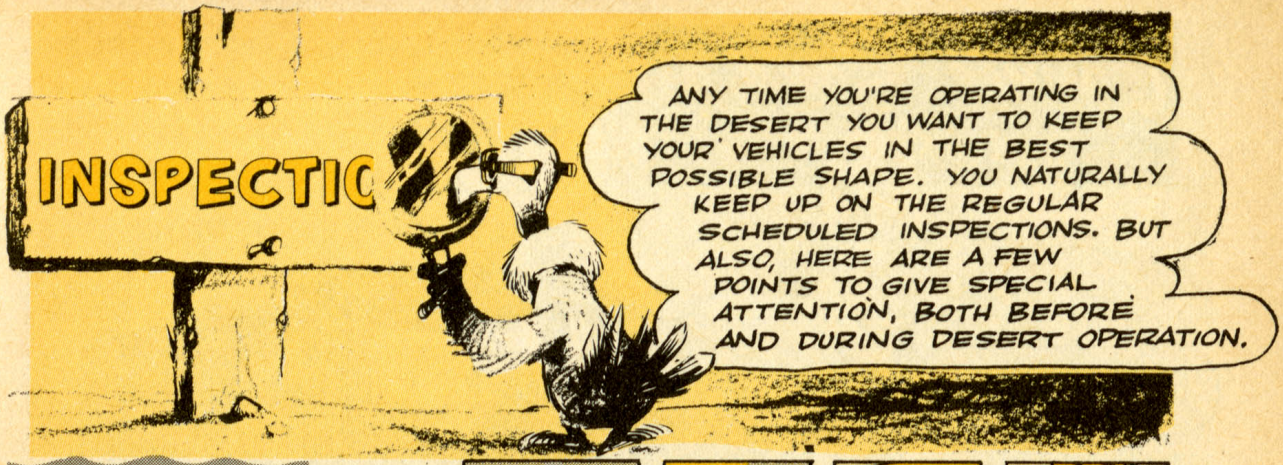
outa the hole. Or sheets of corrugated iron, or even old canvas will help. If you have equipment to pump tires you can let out about $^2/_3$ of your air for greater traction—reinflate at once.



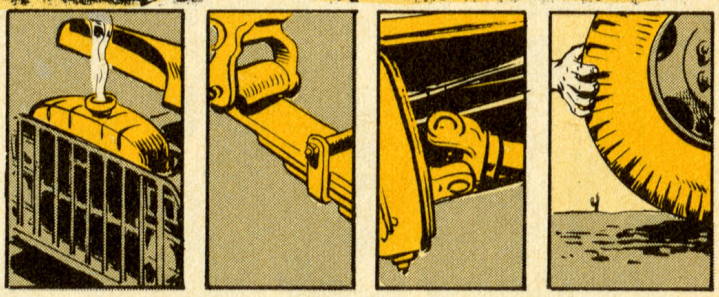
You can't be sure a three-hour drive won't turn into a three-day wait for a recovery section. Stay with your vehicle. Don't wander off and get lost.



Wrecker and VTR operators should also latch onto a large tarpaulin and stow it on their vehicles. This is used to form a "sand parachute" deadman for recovery winching when nothing else offers. You dig a hole, put the tarp down over it, shovel back as much sand as you can and still get all four corners of the tarp back together. These corners then give you something to fasten your cable to. Or you can bury a spare wheel, with the cable attached, under a tarp full of sand.



WHEELED VEHICLES

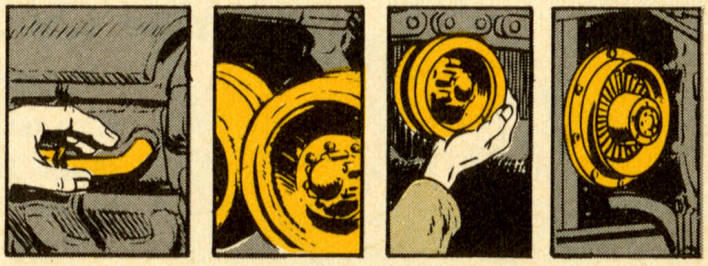


Check your cooling systems, spring shackles, universal joints, tires and brakes extra carefully before you start into the sands, and keep a daily eye on 'em while you're out there. Your brakes will need to be cleaned often or they'll fill up with sand and grind away to junk.

Your radiators want to be kept clean and free of any clogging. Turn your propeller shafts and feel for slack in the U-joints. Wheel bearings want to be in top shape before you leave the post, and then be careful not to expose 'em when any sand is blowing. Make sure all OVM and tools, emergency gear, etc. is on board and in serviceable shape.

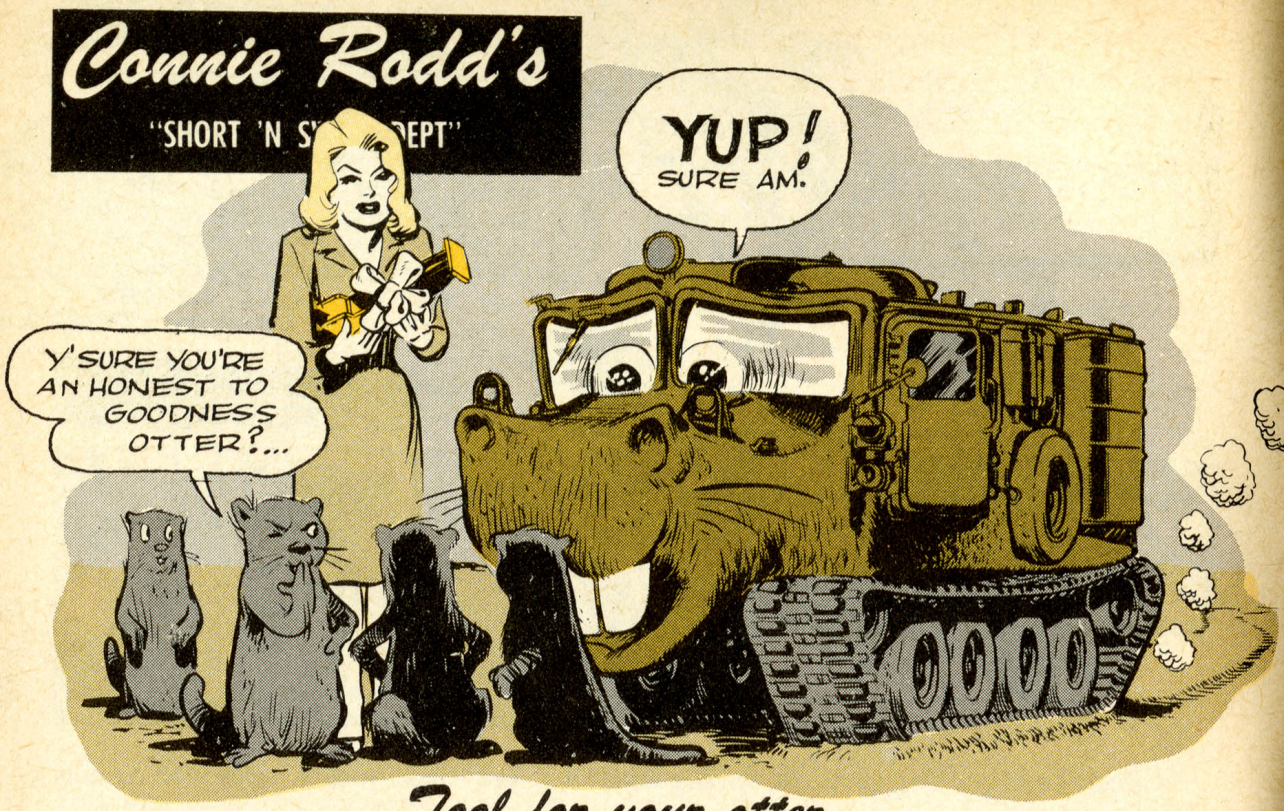
CHECK THESE

TRACKED VEHICLES



Before starting away from base, check the tracks, road wheels (particularly bearings), support rollers, and cooling fans. When under way, keep an eye on tracks, road wheel tires and support rollers for signs of rubber failure. Desert conditions are hard on rubber. You may even be issued steel tracks for long operations. Once more, is all OVM and so on in place and fit to use?

And remember to check your TM's and LO's, particularly on fire control equipment.



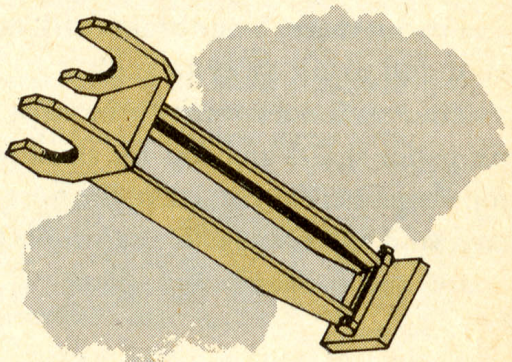
Tool for your otter

It's here!

The new roadwheel arm lifter for your M76 amphibious cargo carriers.

It's being issued as part of the Special Tool Sets A and B, and goes under FSN 5120-592-3679.

Better check with supply to see if they've got one for you.



Look alike, yes...but

They're not the same. That's the story on the distributors for your G742-series 2½-ton and G744-series 5-ton trucks.

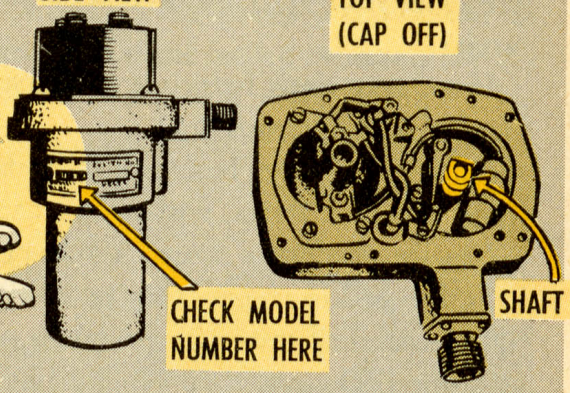
They look as identical as peas in a pod. Yet, if you put one on a truck where it doesn't belong you're going to have plenty of hard-to-find ignition troubles.

They're both Delco-Remy jobs, their size and shape are the same, and every nut and screw looks the same. But

they're not interchangeable, because the shaft of one revolves in a clockwise direction and the shaft of the other turns counterclockwise.

About the only way you can tell 'em apart is by checking the Delco model number on the distributor housing case before putting it into a truck.

The G742-series trucks use Delco Model 1111556 (FSN 2920-776-2685), and its shaft turns clockwise (as viewed from the top).



The G744-series trucks use Delco Model 1111561 (FSN 2920-735-3276), and its shaft turns counterclockwise.

Mate 'em right

Got leaks coming from your M48 or M48A1 tank's fuel-line quick-disconnect coupler? If so, it could be happening for a few reasons, but one of the most likely is that you have the wrong fuel-pump flexible line hooked up with the wrong elbow.

Just to start at the beginning, there have been two elbows made for that assembly. The earlier one is a 45-degree job that carries FSN 4730-254-1801. The later one has a 90-degree bend and goes under FSN 4730-350-9607.

There have also been two flex lines made. The earlier one is 29½ inches long and carries FSN 2910-314-0366. The later one is 12 inches long and carries FSN 2910-611-2872.

Now, it's just a matter of getting the right elbow with the right flex line—and this is how they go:

Use flex line, FSN 2910-314-0366 (the 29½-in one) with 45-degree elbow, FSN 4730-254-1801. Use flex line, FSN 2910-611-2872 (the 12-in one), with 90-degree elbow, FSN 4730-350-9607. It's as simple as that—just don't mix the wrong line with the wrong elbow. Keep 'em mated.

Now, if you're still having leak trouble, get off a UER (DA Form 468) telling Chief of Ordnance, Department of the Army, Washington 25, D. C., ATTN: ORDFM, all about it.

Bent stop-screw

You got bent engine frame stop-screws on your M75 armored personnel carrier?

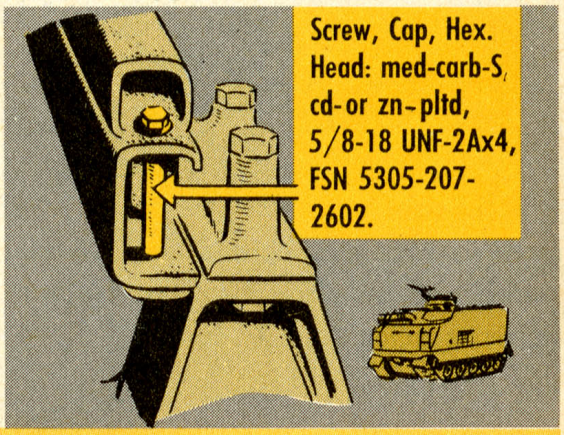
If so, take steps before it runs itself into a real dangerous deal.

Since it's always best to stop something before it starts, why not be careful to see that these screws do not get bent by making sure they're always tight, and that the engine's taken out and put back into that vehicle like it says on page 130 of TM 9-7418.

But, after doing all this and the screws still don't stand up, you'll have to change 'em for a larger size. The screw that's in there now is this one:

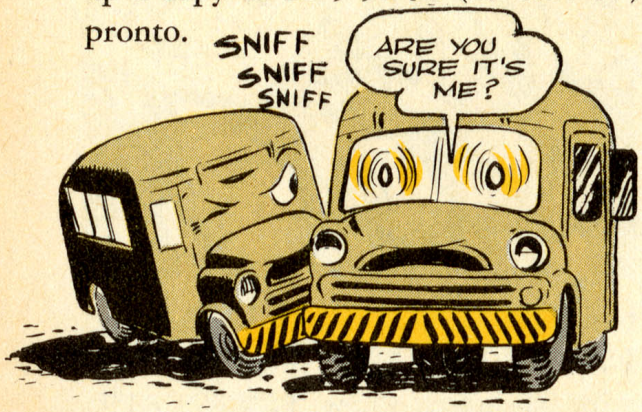
Screw, Cap, Hexagon Head: med-carb-S, cd- or zn-pltd, 3/8-24 UNF-2A x 4, FSN 5305-206-0010.

If they're getting bent, replace them with this type:



Wanderbust

Been sniffing a burning-wire smell coming from your 1957 37-passenger Dodge bus? If so, you'll want to hunt up a copy of SB 9-98-32 (25 Nov 57) pronto.



Wires in that bus could start burning when the 12-volt battery runs low. The battery starts drawing a continuous flow of current from the generator for a recharge job. Within the time it takes the generator to fully charge the battery, that wire from the generator to the battery can get real hot and start smelling. That wire, which is 12-gage stuff, isn't heavy enough to carry that kind of load for a long period of time.

SB 9-98-32, which covers warranty replacement of the wiring harness in the bus, gets rid of the light wire and replaces it with heavier stuff. It says that using units will submit requests for replacement parts to: Commanding Officer, Rossford Ordnance Depot, Toledo 1, Ohio. You have to send along the serial number of your bus, too.

The contract number under which those buses were bought is DA-20-113-ORD-21592. Check it out now, before you get yourself a burned bus—done medium rare.

Meanwhile, until you get the heavier wire, be on your guard. If your battery gets below 1.225 specific gravity (corrected to 80° F), take it out of the bus and have it charged.

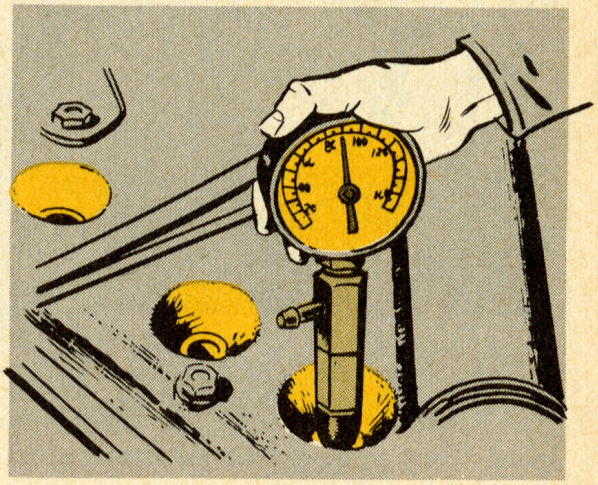
Plugs plastered?

Your G741-series ¾-ton trucks keep coming up with fouled spark plugs, 'specially in the No. 5 and 6 cylinders? If so, be sure you check your fuel-pump vacuum-booster before you send that truck to Ordnance.

Quite a few trucks have been going in that hadn't a thing wrong with 'em except a leaking diaphragm on the vacuum side of the fuel pump. This'll really foul up those spark plugs, because the vacuum line comes into the manifold right between the No. 5 and 6 cylinders.

A real easy way to field-check this is to start your engine and turn on your windshield wipers. Then goose your throttle. If the wipers slow down or stop, check your fuel pump on that vacuum gage because that's where the problem probably lies.

If the fuel pump's OK, then of course you make a compression test on the engine, and if the fouled cylinders (or any cylinders for that matter) show com-



pression that's ten pounds or more below the rest of the engine, then she really does have to go to Ordnance, but check the fuel pumps first.

PM in reverse

That's sound preventive maintenance in reverse—for calculators, adding machines, electric typewriters and all kinds of office machinery.

Of course, it's always a temptation to push a button or key or two just to see 'em jump and hear the bells ring.

But finger-poking like that hurts office machinery bad... real bad.

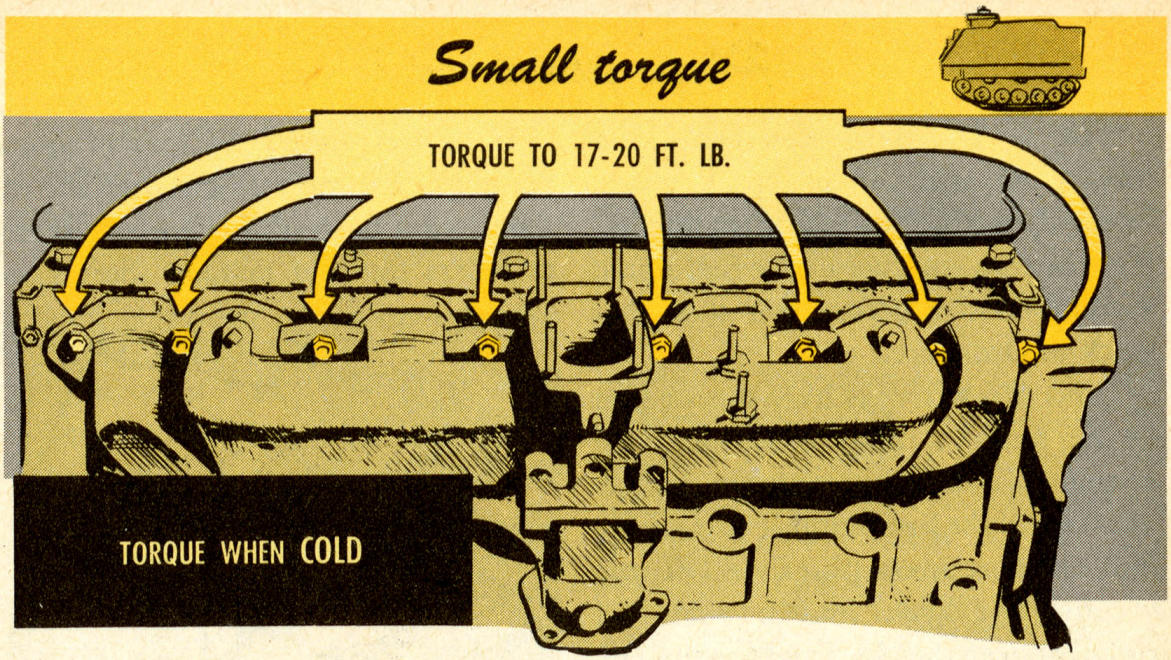
It flubs up the delicate gears, wheels, levers, cams, keys, actuators, hammers, etc., that do the brain work on these mechanical time-savers.

About the only time a machine should be handled—except by a qualified operator or repairman—is when it must be moved.

The sad fact is that careless poking by curious but untrained people causes more damage than everything else put together.

Next time you see an office machine —give it a dose of reverse PM.

Small torque

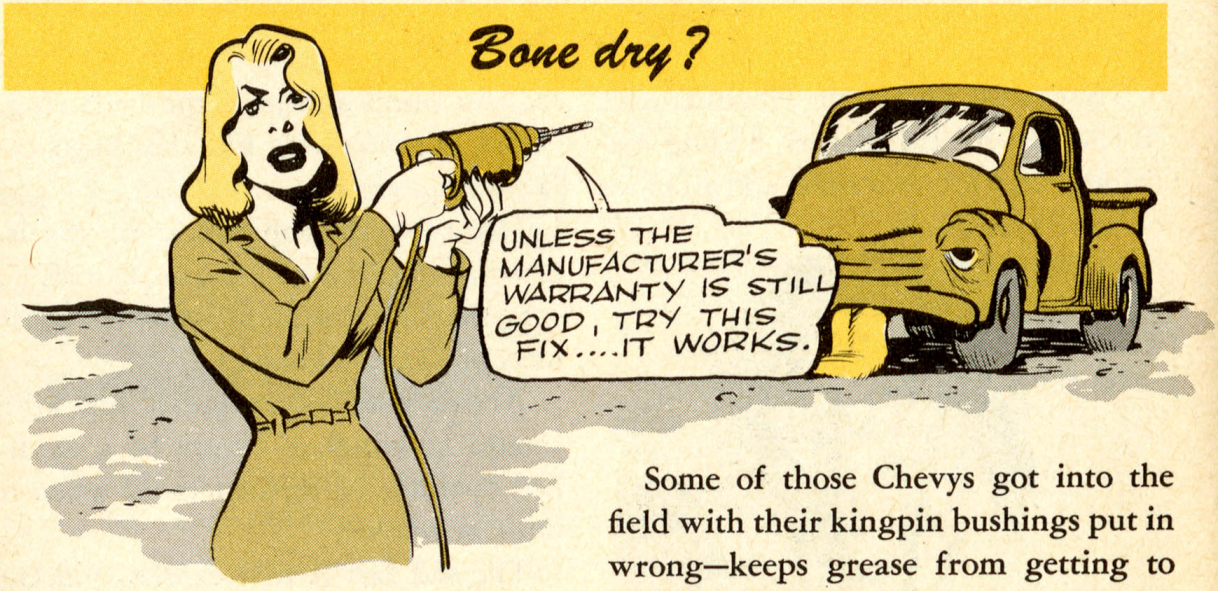


Help solve the cracked manifold problem on your M59 armored infantry vehicles and M84 self-propelled mortar carriages by making a note of these torque specs. They're new—the results of mucho checking.

From now on, torque the manifold clamp stud nuts to 17-20 foot pounds, instead of 15-20 foot pounds like you've been doing. Those manifold end stud nuts are run up to between 17-20 foot pounds, instead of 25-30 pounds. Torque those manifolds when they're **cold.**

This is the latest dope and will probably stop a lot of that manifold cracking.

Bone dry?



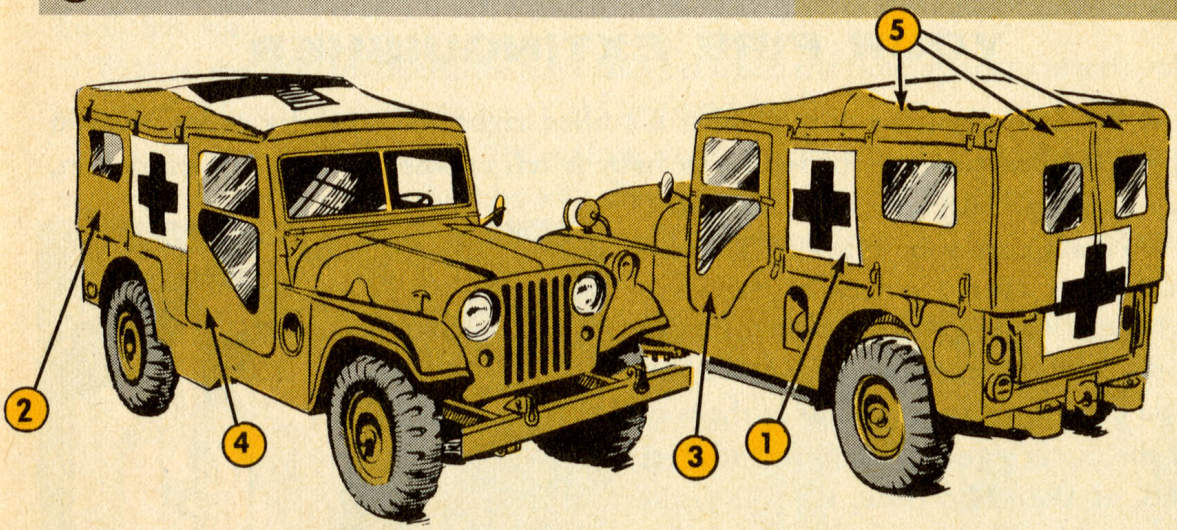
See any grease alongside the kingpins—coming from the kingpin spindle bushing—of your Model 3100 ½-ton Chevy pickups? If not, better get the vehicle back to support.

Some of those Chevys got into the field with their kingpin bushings put in wrong—keeps grease from getting to the kingpins. If the warranty's still good, the manufacturer'll fix it up. If not, your support outfit has to drill a grease passage through the bushings, so you can get grease up there.

Canvas clammer

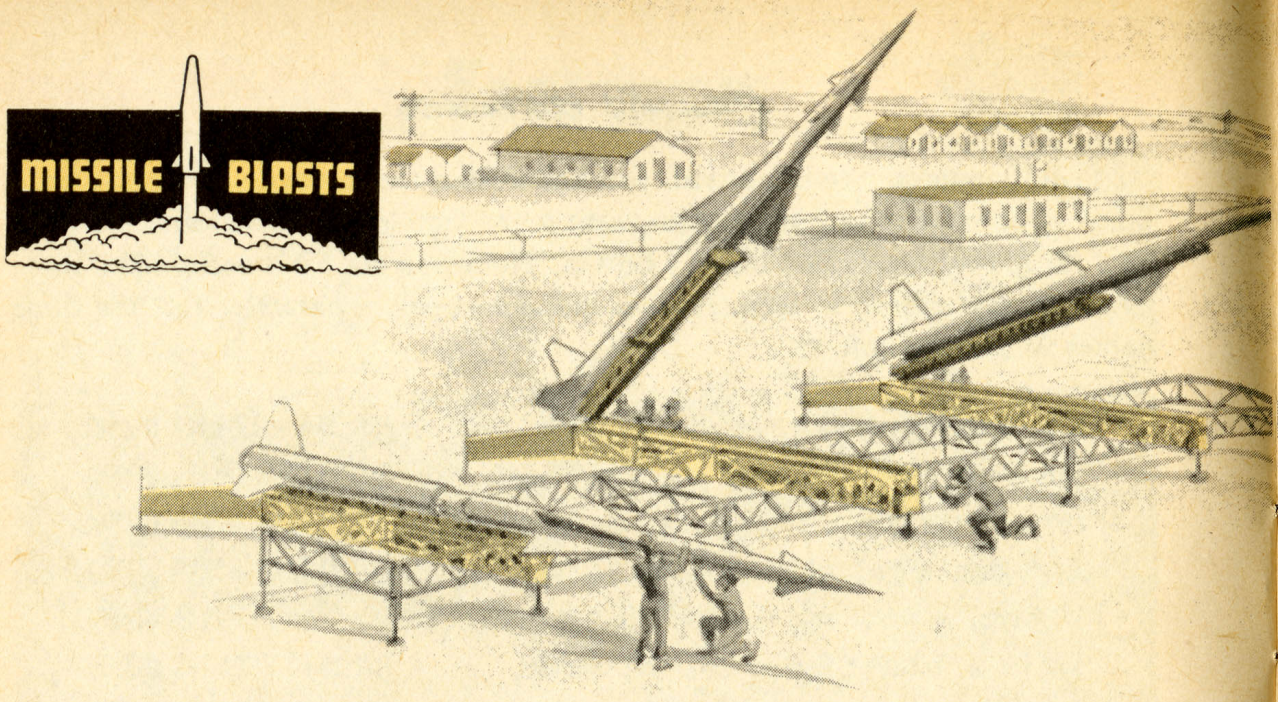
"Calling-names" are important, you know—and for those of you who've been hung up in your record-keeping on these items, here're the names and numbers on your M170 ¼-ton ambulance's canvas. There's no one kit containing all these items, so you'll have to identify each individual part separately. Just use these names and stock numbers—

(1) Side Curtain Vehicular, left assy	FSN 2540-512-9137 (G758)
(2) Side Curtain Vehicular, right assy	FSN 2540-512-9154 (G758)
(3) Side Curtain Vehicular, left door assy (w/out frame and trim)	FSN 2540-512-9139 (G758)
Side Curtain Vehicular, left door w/frame and trim	FSN 2540-512-9149 (G758)
(4) Side Curtain Vehicular, right door assy (w/out frame and trim	FSN 2540-512-9144 (G758)
Side Curtain Vehicular, right door w/frame and trim	FSN 2540-512-9135 (G758)
(5) Top, Vehicular assy, w/end (rear) curtains	FSN 2540-512-9141 (G758)



Step high

It's a long pull from the ground to the stake and platform body on those 1½- to 5-ton stake and platform trucks. Dangerous, too. That's why TB Ord 640 (21 May 56) was put out. It tells you how to put a retractable bumper step on that truck, so you don't have to daddy-long-leg it. Makes getting into the body real easy.

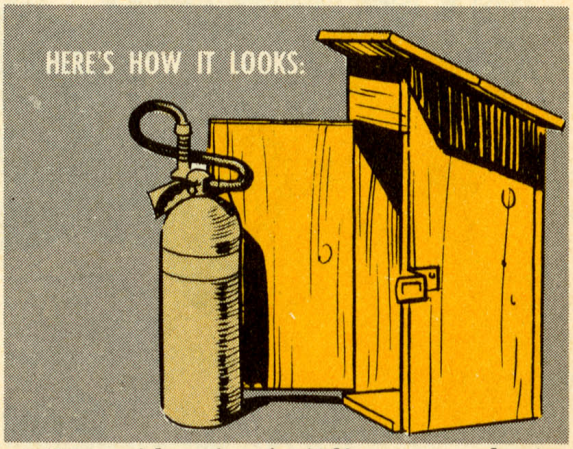


Make a Home For...

YOUR FIRE EXTINGUISHER

A fire extinguisher's only good if it's filled right and working right, but you might be disappointed—bad—if your baby is left exposed to the elements day in, day out, especially around a Nike site.

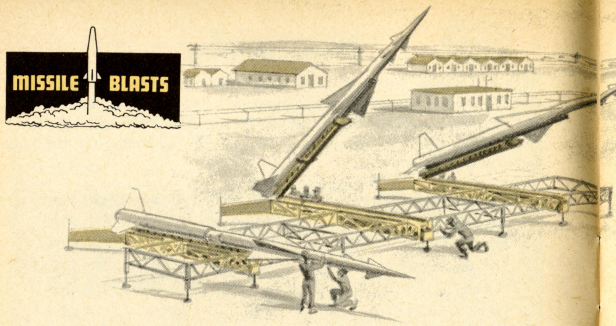
To make sure your cylinder'll always work right when you need it, grab yourself some scrap wood and build a shelter for each of the extinguishers you've got. You can set the cylinder out of the way of the direct slants of the rain and sleet and, at the same time, keep it right handy. If and when you need it—it's only an arm's length away and you can slip it out in a flash.



Now if you're going to hang it on a wall or side of a building—you don't even need a bottom... or a door. All you need is a roof, a back for a wall bracket and maybe a couple of sides... just enough to keep the extinguisher out of the weather.

Either way you do it, make the roof with plenty of overhang. You can whip up the shed from old warhead and fin boxes and if you decide to include a door ...you can even put a butterfly latch on it.

If you want to do it up right, paint it the standard fire color and letter "Fire Only" on the outside. For real lasting protection, cover the roof with tar paper or canvas.



Make a Home For...

YOUR FIRE EXTINGUISHER

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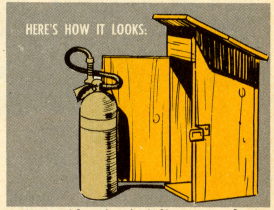

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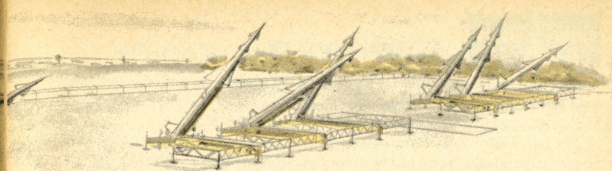


THE OLD AND THE NEW

Could be your Nike pits have had new weather seals put around 'em lately. If not, they'll get 'em soon.

The new seals, which are "P" type, are being put on by your support unit when the old "O" type ones wear out.

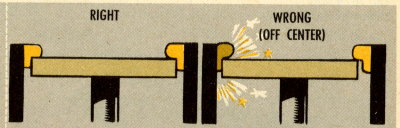
On some sites where the new "P" seals are used, there's been trouble with 'em coming loose. Some are even breaking. The "P" seals have a hole drilled every 12 inches, just like the old "O" ones. So, the easiest way to install the "P" seal is to put the bolts right in the holes used for the "O" seal. But they don't always hold that way.

Talk to the field maintenance boys about it when the time comes to install your new seal. They'll make sure your "P" seal will hold.

If you've already got the "P" seal on your pits, check them for looseness or tearing. If they're not sealing the way they should, tell field maintenance.

A little care and cleaning every week will help keep your "O" and "P" weather seals working.

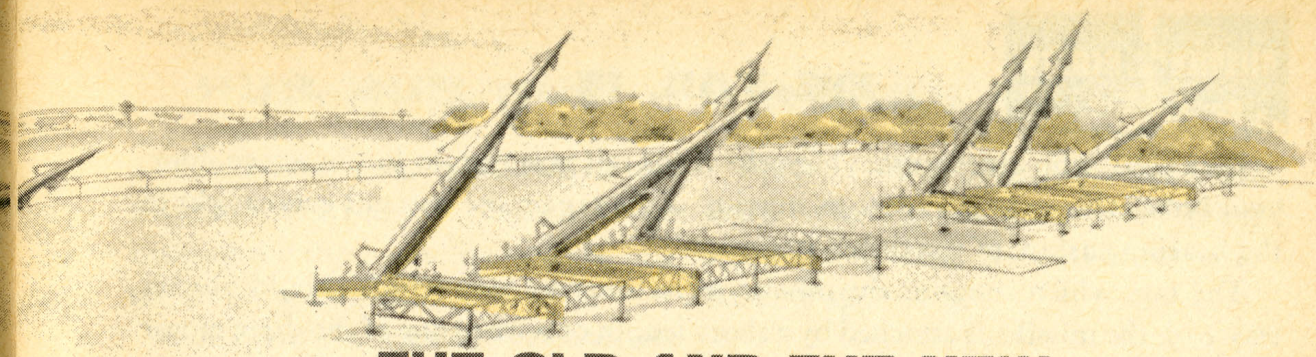
Dirt collects between the seal and the pit wall. During your weekly service, clean the dirt out from behind the seal.



Any type of weather seal takes a beating if the elevator is off-center. An off-center elevator will wear out the seal faster on the side—or end—of the pit it's leaning against.

Here's a fix that'll make the elevator slide over the "P" seal easier: Scrape the paint off the sides of the elevator. Mix up a solution of 20 per cent graphite and 80 per cent lightweight lubricating oil. Use a cloth to wipe the solution very lightly on the sides of the elevator and over the "P" seal. The solution will help the elevator slide over and past the seal with less wear and tear.

So give a check all around on how well your weather seals—old or new—are holding up, keep the dirt out from behind 'em, and make sure your elevator's on the level.



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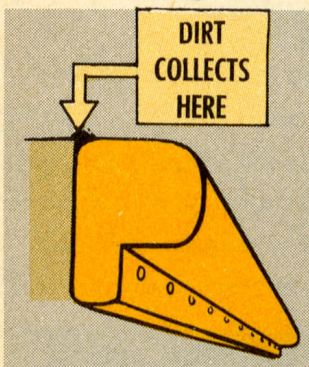

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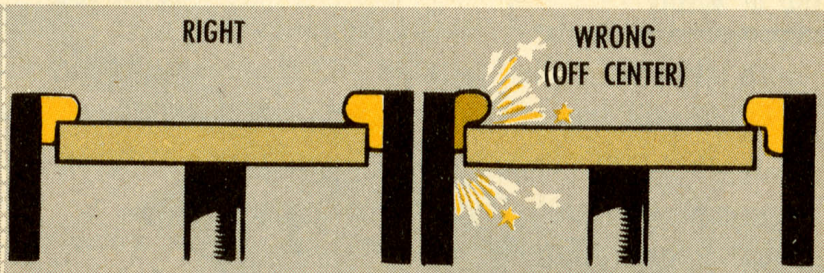

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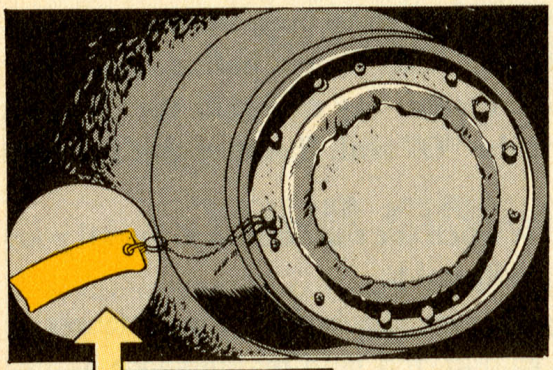
DE-TAIL IT

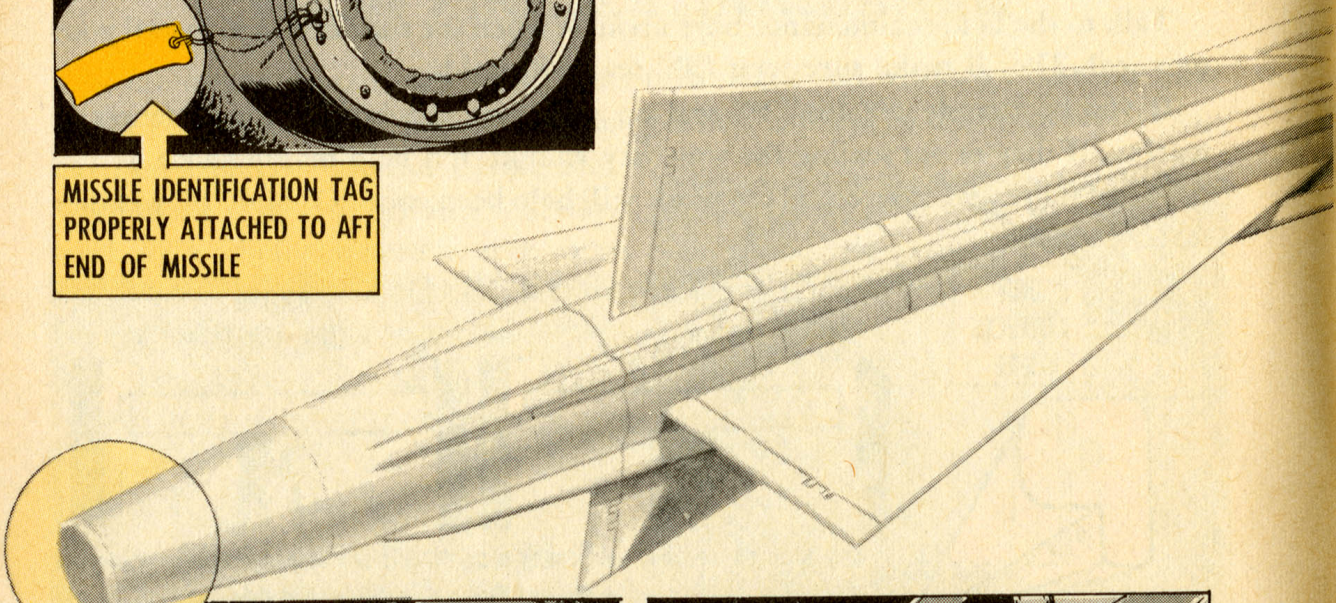
Like Fido, who gives a great big yelp if his tail gets caught in the screen door, your Nike-Ajax missile's apt to be hurting if the tag on the bolt tail gets caught in the bearing surface of the thrust structure.

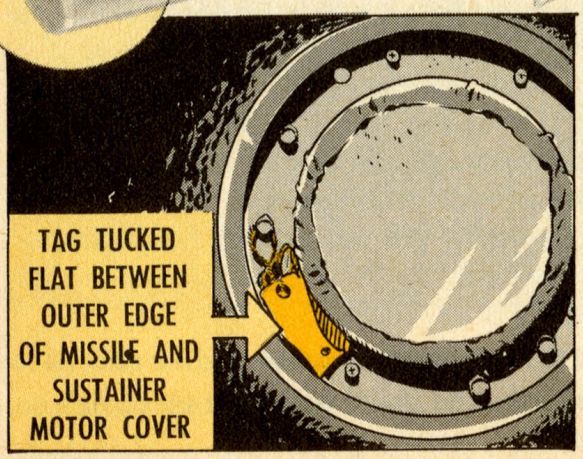
The tag, which contains the missile serial number and which should always stay with the missile, is attached by a short length of wire to one of the three motor mounting screws at the aft end of the missile. When you go to attach the thrust structure, it's easy for the tag to get caught.

Best way to keep this from happenin' is to bend the wiring on the tag flat or tape it solid-like to the missile so it'll stay put and not hang like a wagging tail. This way you'll keep it out of trouble.

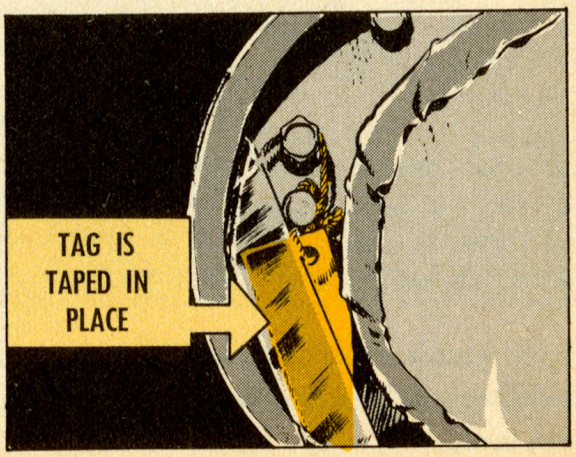


MISSILE IDENTIFICATION TAG PROPERLY ATTACHED TO AFT END OF MISSILE





TAG TUCKED FLAT BETWEEN OUTER EDGE OF MISSILE AND SUSTAINER MOTOR COVER



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MISSILE BLASTS

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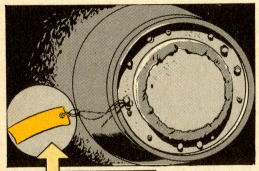

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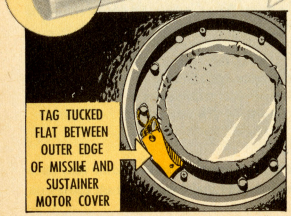

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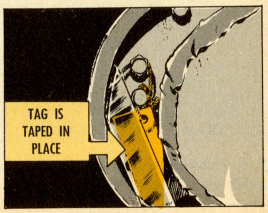
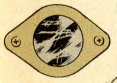


TAG IS TAPED IN PLACE

RUB, BUB, RUB

You'd never catch a Nike-Ajax missileman using rouge . . . unless he was making the three windows on the missile fit for seeing through.

You know the windows—two are for looking at the "safe-armed" indicator and the third is for looking at the high-pressure air gage.



PLEXIGLASS MAY BE SCRATCHED

The windows are made out of plexiglass . . . and time and wear puts scratches in 'em—making it rough to see through to the other side.

You can make the windows look close to new by rubbing them with red rouge used by jewelers.

What you do is rub the stick of rouge on to a piece of flannel cotton cloth and then rub the cloth against the window for five to ten minutes.

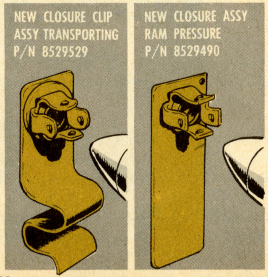
The rouge goes by this handle: Rouge, abrasive: polishing, jeweler's, ½-lb stick. It's an Ordnance item and has this FSN: 5350-240-2212.

The cotton cloth is the same kind used to clean your carbine.

WORKS BETTER

MWO Ord Y-2-W11 has been out since 1 Oct 57, but word's been going around that some Nike-Ajax batteries haven't applied it.

The MWO's the one that puts a new type of ram pressure closure assembly and a transporting closure assembly on missiles with serial numbers from 1001 through 12,050 and 50,001 through 50,220. Missiles with other serial numbers are getting the new assemblies as they roll off the production line.



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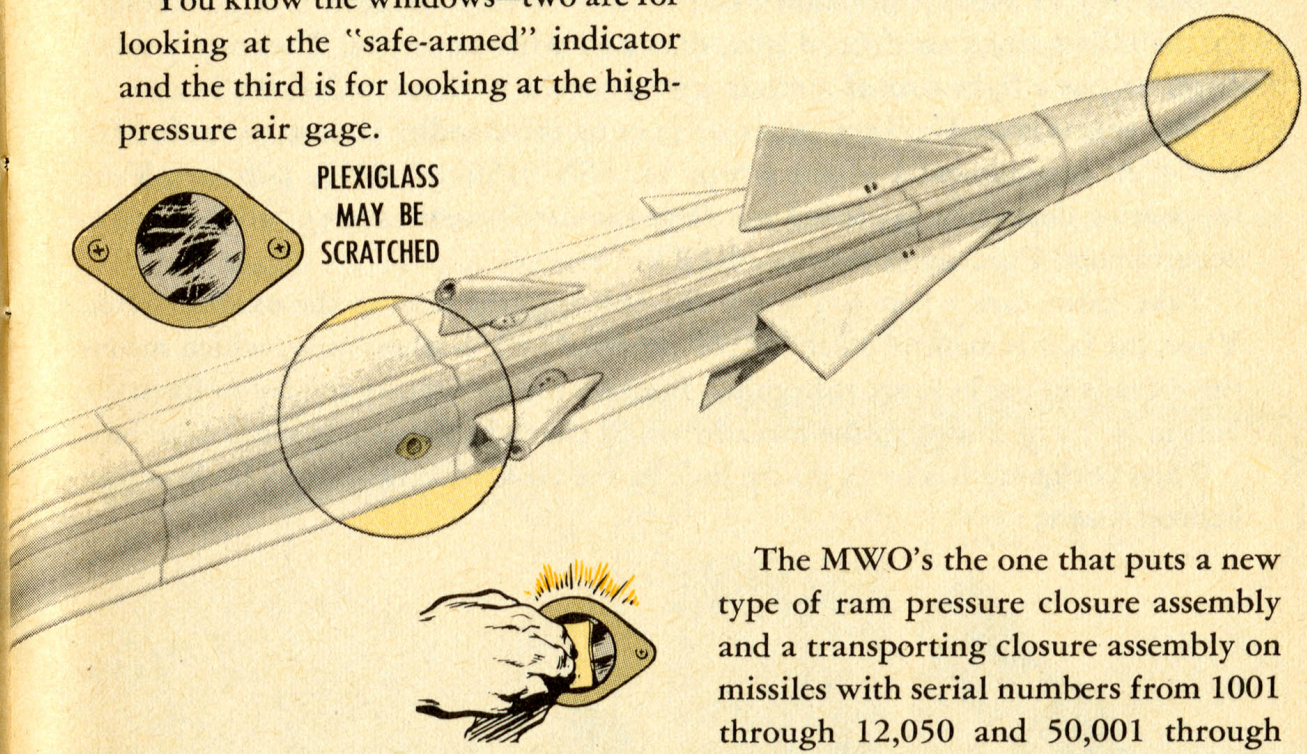

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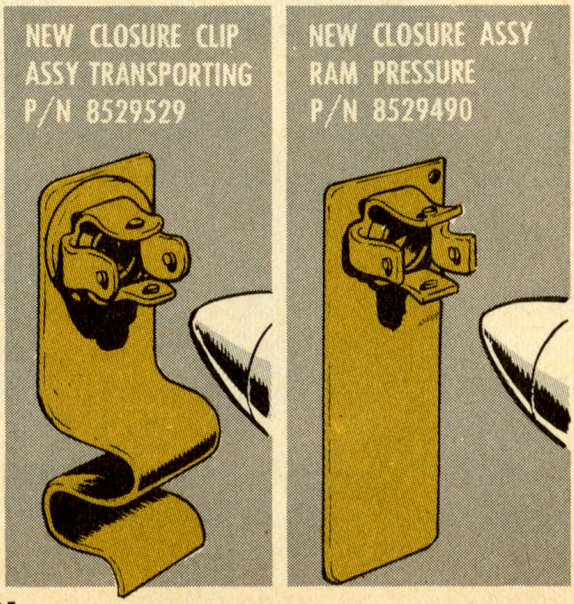
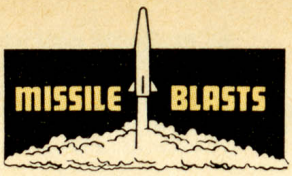




IT'S A RINGER

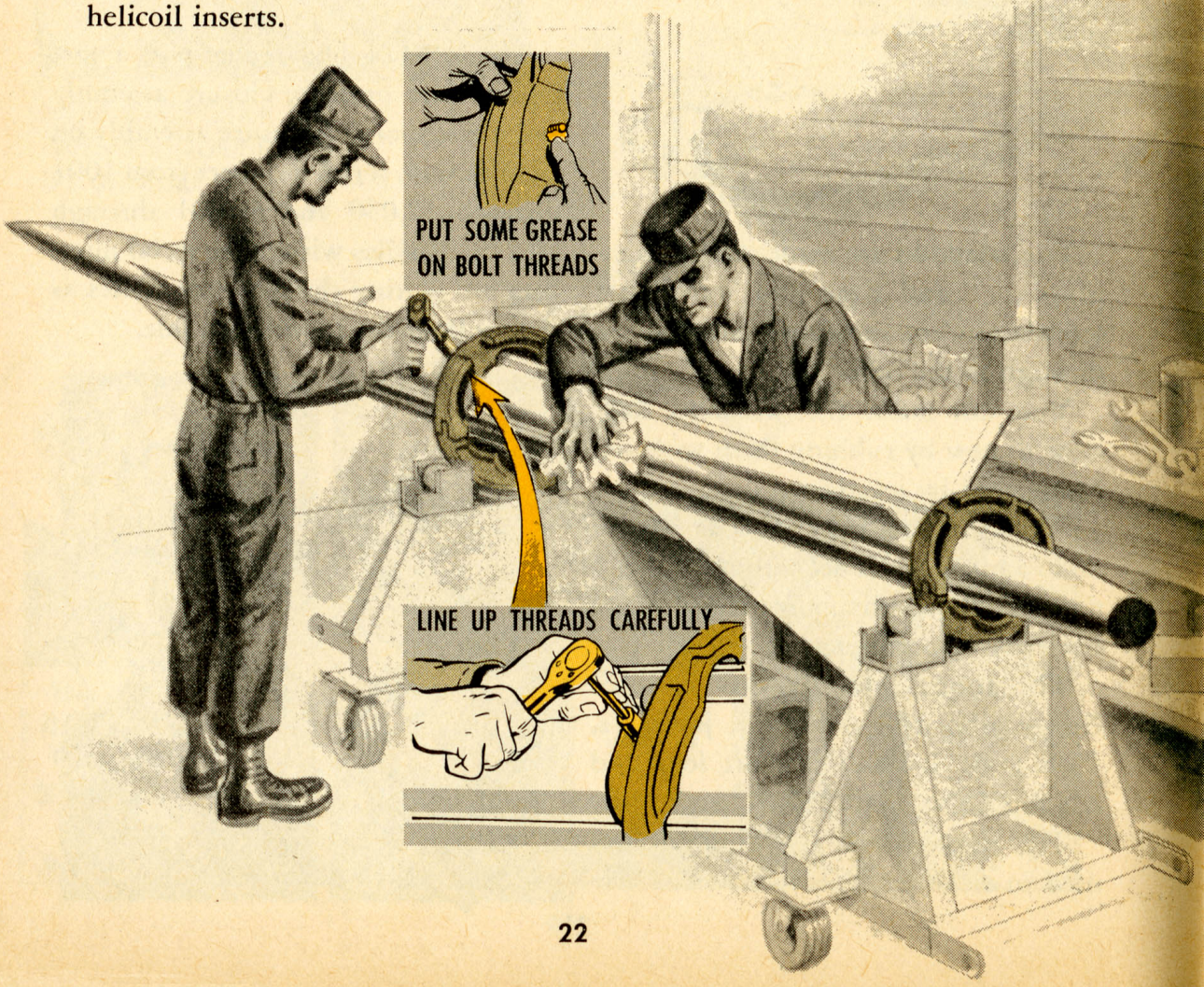
Careful now . . . you wanna watch what you're doing when you wrap handling rings around your Nike-Ajax missile. If the bolts don't hold the ring and the missile together like they should, like as not those rings'll come loose and let your missile in for a fall.

Best way to avoid a situation like this is to be sure the bolts that go through the handling rings are free of grit, dust and what have you. Then use a spare finger to put a light coat of aircraft grease on the business end of the bolts.

The grease is an Air Force item that goes by this handle: Grease, aircraft, Mil-L-4343A, Amendment 1, dated 1 Sept 54, FSN 9150-269-8255, 1-lb can. Your supporting depot can get it for you from the Air Force through a Military Interdepartmental Purchase Request (MIPR).

Take extra care when you screw the bolt into the hole in the oxidizer tank. Y'see, the bolt is made of steel and the oxidizer tank is aluminum, which means the threads in the hole are softer than the ones on the bolt. If you try to force the bolt in 'stead of lining up the threads, you'll chew the threads in the hole to bits.

Then Ordnance has to fix up the hole in the tank with new threads—by using helicoil inserts.



MISSILE BLASTS

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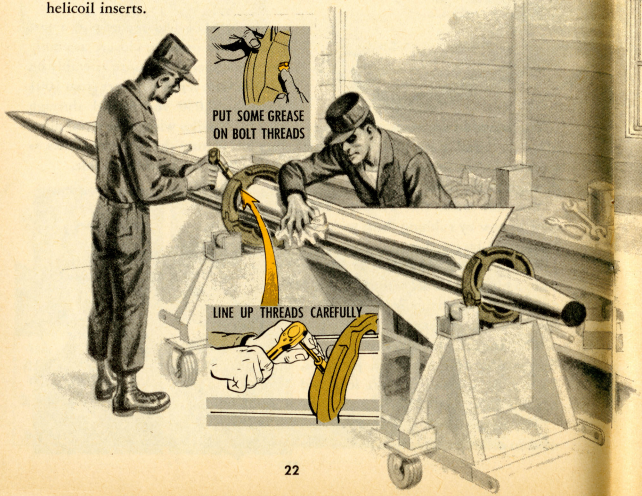

Just like DA Circulars 310-43 and 310-51 say, those Nike-Ajax Handbooks have TM numbers now, all in the 5001-series. And remind your publications source when they order 'em for you that they're stocked **only** by the St. Louis Adjutant General Depot.

Don't forget, tho, the 5001-series TM's are being superseded by second edition TM's. Fact is . . . some of the new TM's are out. So keep track of them.

TEST . . . RESPOND

Dear Half-Mast,

Many Nike-Ajax missiles are taking a beating for no reason. People are forgetting that a missile is designed for one flight only. I've seen outfits where Nikes have the equivalent of 100 hours on them.

Here's why—

When fire control wants to check out its missile tracking radar, many are calling for the raising of the missiles. Result is a lot of wear and damage to the electrical parts and the hydraulic system of the missile and its launcher, especially O-rings.

Instead of the missiles, the MTR men should use the test responder located on the mast of the launcher control trailer. This will respond the same electronically as a missile would, and save that wear and tear.

Wish you'd bring this point across. *Capt R. B.*

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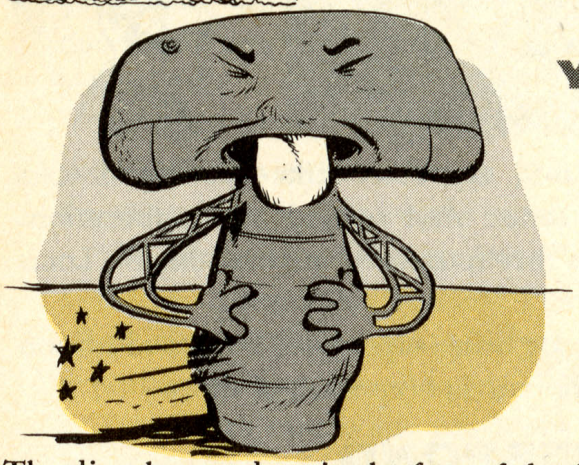
MISSILE BLASTS

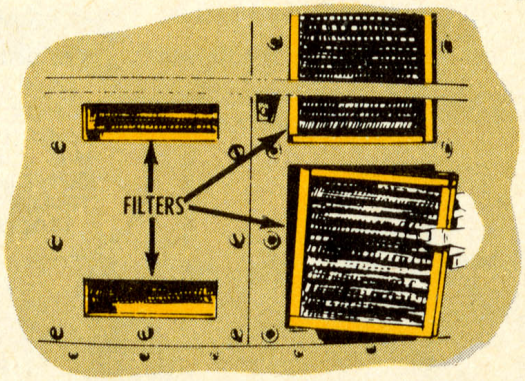
If Your Blower Doesn't Blow . . .



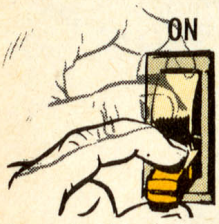
YOUR SLIP'LL SHOW

You'd never catch a Nike-Ajax missileman firing a carbine magazine full of ammo into the blower motor of the acquisition antenna.

But, you end up with the same kind of troubles when you let the intake filters on the acq RF unit get full of dirt. The dirt slams a door in the face of the flow of air to the motor . . . the motor gets hot . . . the lube doesn't stand up . . . the bearing seizes on the shaft . . . and things come to a screeching halt.



The thing to do, sure as shootin', is to keep the filter clean. And keep your good ear open. If you catch the motor taking a long time to crank up to operating speed, it could mean the filter's clogged with dirt.

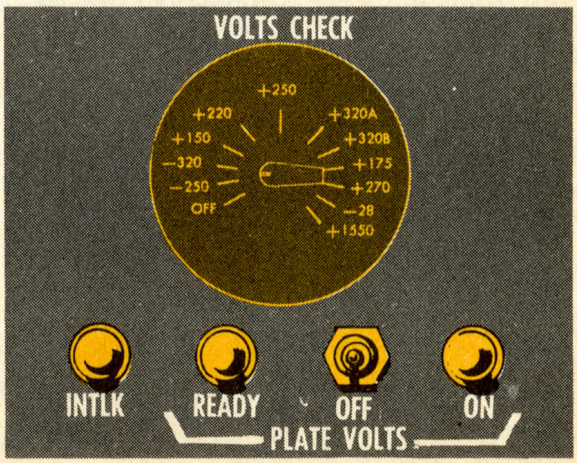


After the filter's cleaned, could be the motor never does get wound up to the right speed. That might be a sign it's not working on all three phases.

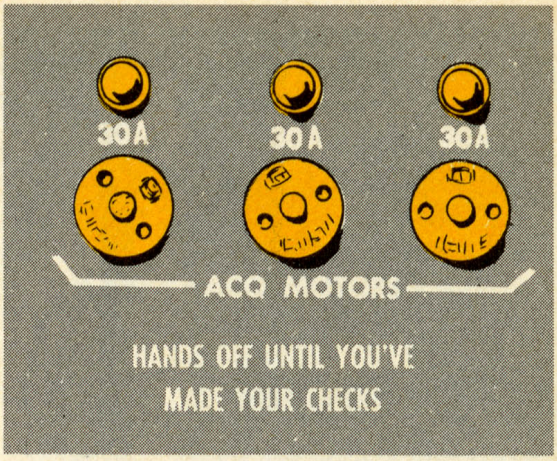
What happens is that as you throw the acq antenna main power switch on . . . then off . . . then on . . . etc. . . . over a period of time, the contact for any one of the three phases could become burned. Or the contact gets loose. That kaputs one phase . . . and means the motor runs slower on the two phases that are left. That's when you call in support.

When contacts for two, or all three phases go, the motor won't.

It's a good idea to keep the contacts clean in rotary-type switches, like the plate voltage check jobs in your acq and radar power control panels.



Another thing . . . if any of the three 30-amp fuses in the circuits blow, don't put in a new one until you check out the switch and circuits that have anything to do with the switch. You know, run a continuity check with your multimeter. The idea is to find out what's causing the fuse to blow... not just replace it. If trouble can't be located, call your support unit.



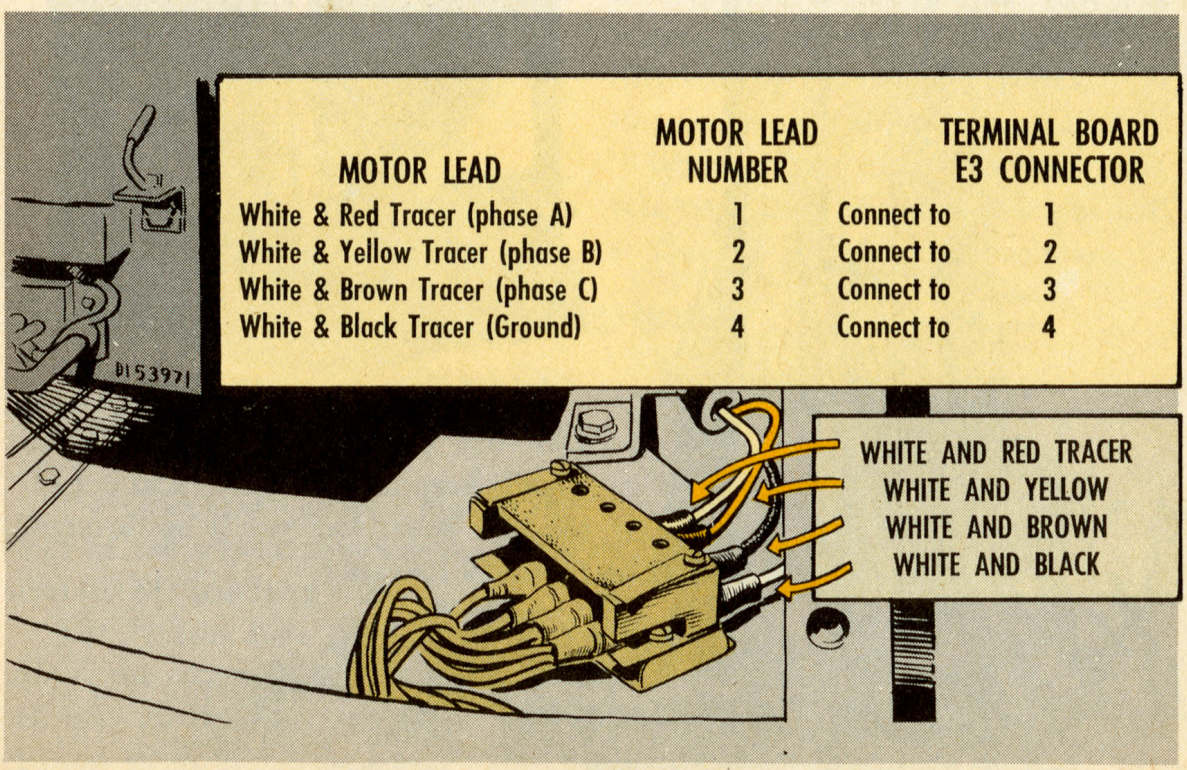
BY THE COLORS

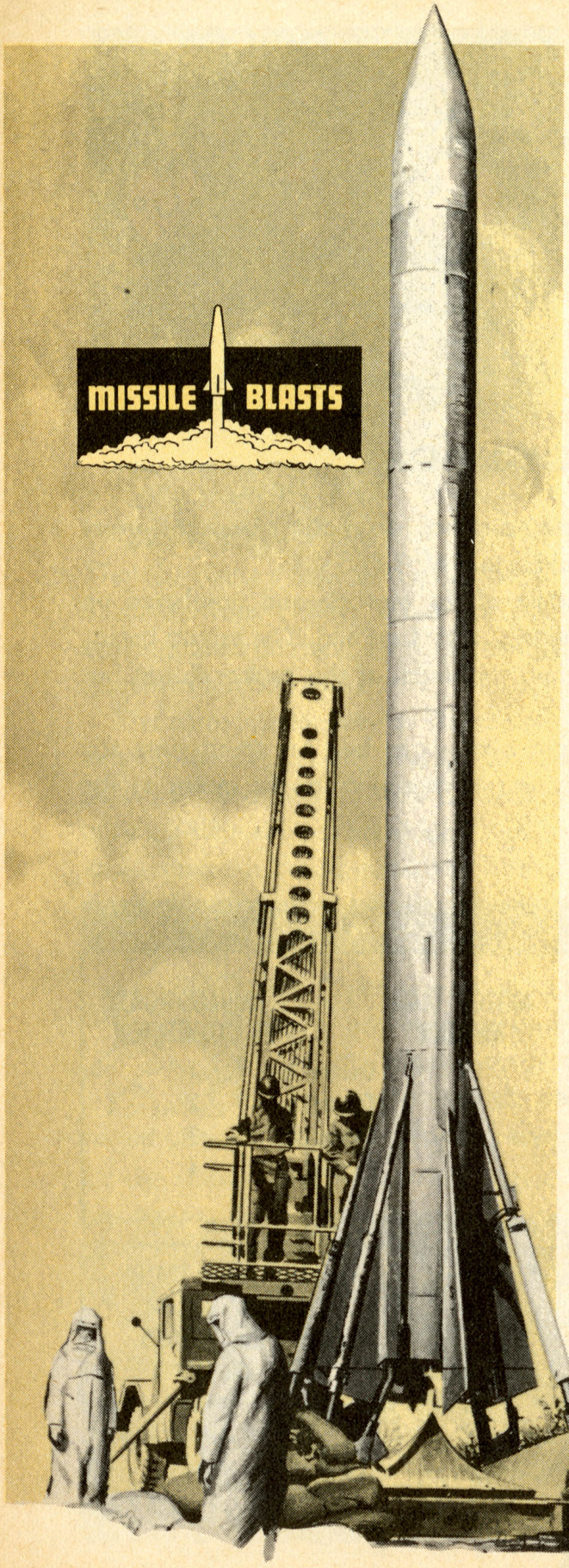
Then there's the one about the acquisition-antenna magnetron blower-motors which've been burning out at some Nike-Ajax and M33 FCS sites.

Seems the leads are color coded on some of the motors—and numbered on others. Also seems the colors are being mixed... and thass bad. The mixup means the motor runs at a higher temperature and too much of this makes things hot for the motor.

Maybe your motor is running hot right now . . . so hop on up to your acq antenna pronto for a look-see at the way the leads run from the motor to the terminal board E3 connector.

Things oughta stack up thisaway:

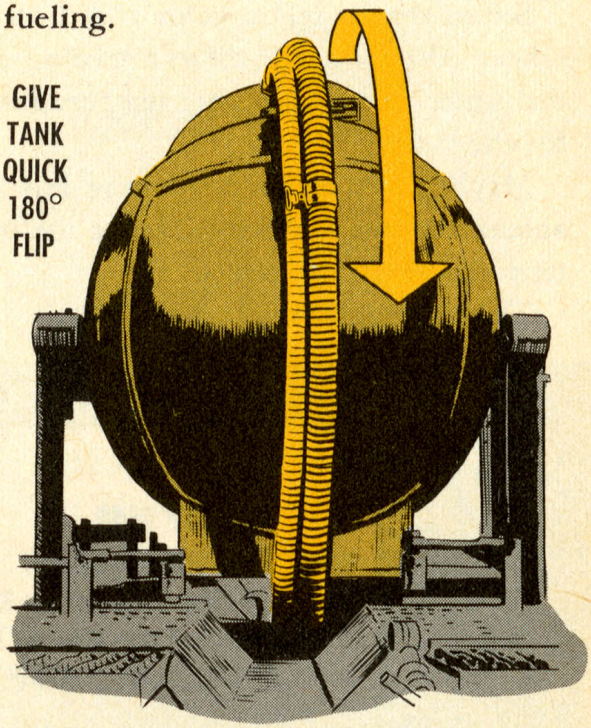




FAST ROUND

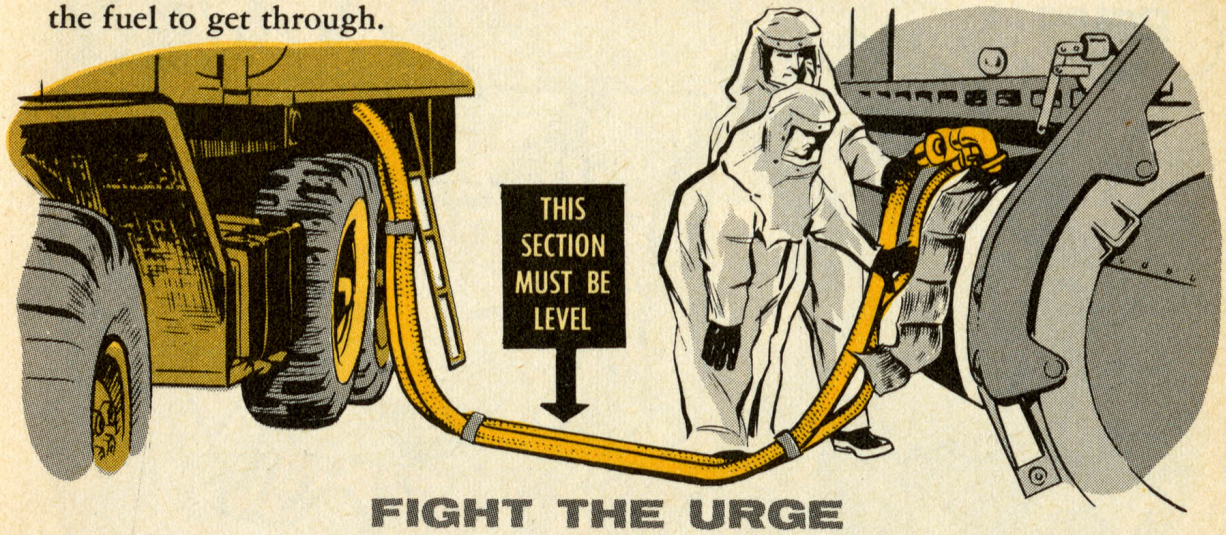
Maybe you've been able to read a couple TM's while waiting for the aniline or acid to run from your propellant servicing truck to the Corporal missile. It's been taking that long for the stuff to run through the transfer hose?

That'll happen when you hook up the hose to either the aniline or the acid tank and then rotate the tank, easy-like, to bring it around the needed 180°. That's the wrong way to do it 'cause slow turning lets aniline or acid get into the vent tube. And, no vent, no quick fueling.



You wanna give the tank a quick 180° flip when you're ready to fuel. That'll keep the aniline or acid out of the vent tube. And you'll be through fueling a lot faster.

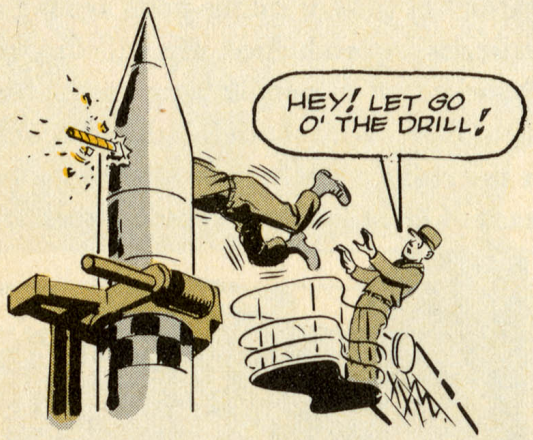
Something else that'll help get the job done faster . . . make sure the lowest three-foot section of the hose is level. Anything less and you make it tough for the fuel to get through.



FIGHT THE URGE

A Corporal or Nike-Ajax missile just don't mix with a drill that's turning out the old RPM's—something like water and oil not getting along together.

That's another way of saying you don't want to drill any holes into a component of the missile—unless an MWO tells you to. And then remove the thing you want to drill, if it's possible. You know how it is when you're drilling through something . . . when you break through the other side the drill just wants to keep going. On a missile, the drill could go on through an air or fuel line—maybe the air or propellant tank.



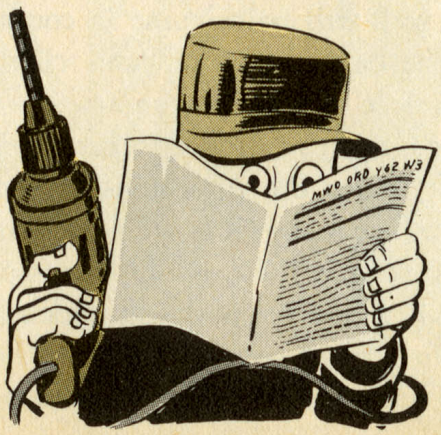
It's a different story in the higher echelons. They have stops for the drill so they can go just so far—no more.

A MUST

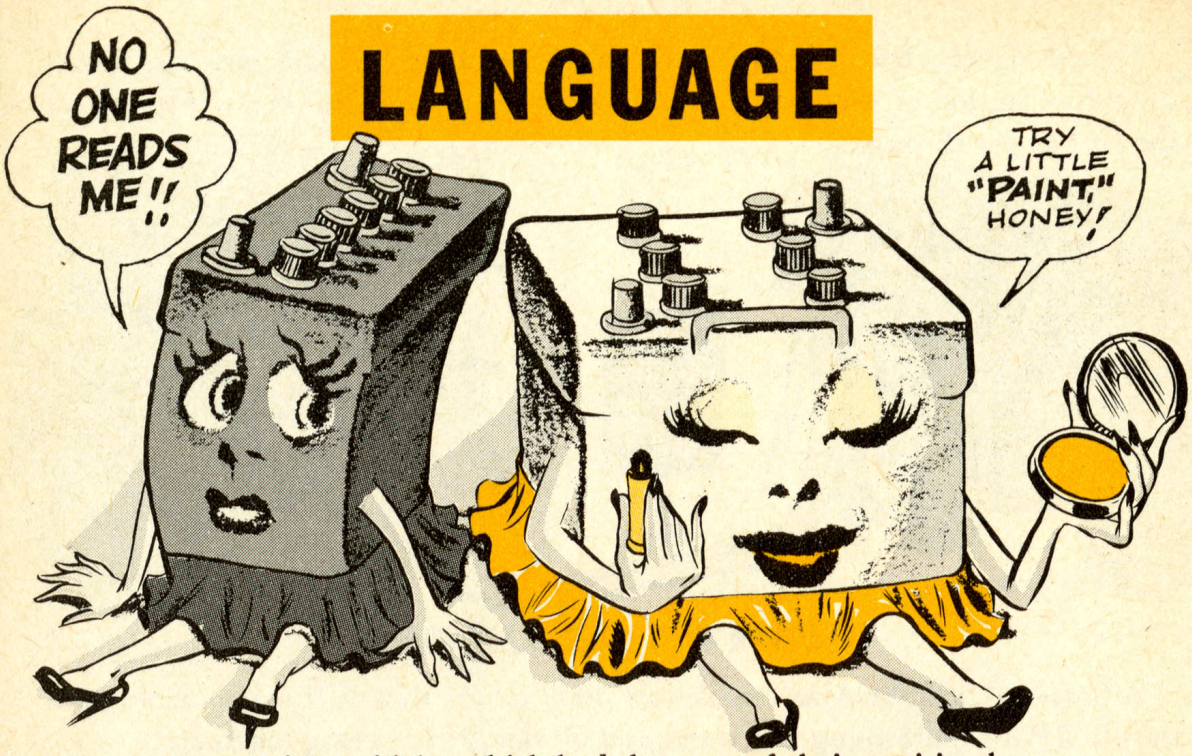
Did you get wind of MWO Ord Y62-W3—the urgent deal for Corporal outfits?

The MWO puts another hole in the legs of the missile shipping container and the M1 handling track.

The $^{17}/_{32}$-in hole goes 1½ inches above the center line of the hole that's already in each leg—giving you more leeway in adjusting the legs.



LANGUAGE

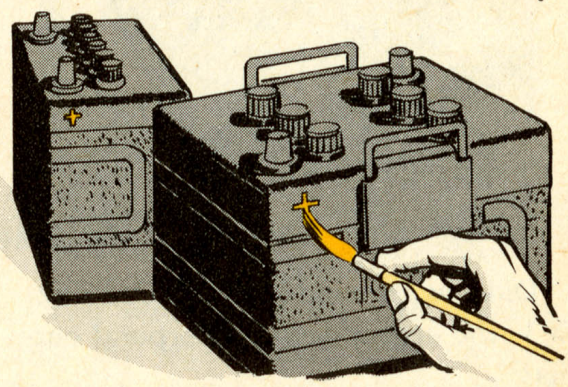


Came across a few vehicles which had the tops of their positive battery posts painted red for ready identification. That method can be improved on a bit.

Of course, you don't need any identification of plus or minus posts as long as the embossed + and − put on those batteries in production are still in good shape. Many times, tho, those signs are knocked off as people bang on the tops of the posts when putting cables on—which they really shouldn't do, of course.

So, to make sure the cables are put on the right posts to stop ol' reverse polarity from doing its dirty work, some means of identification becomes necessary.

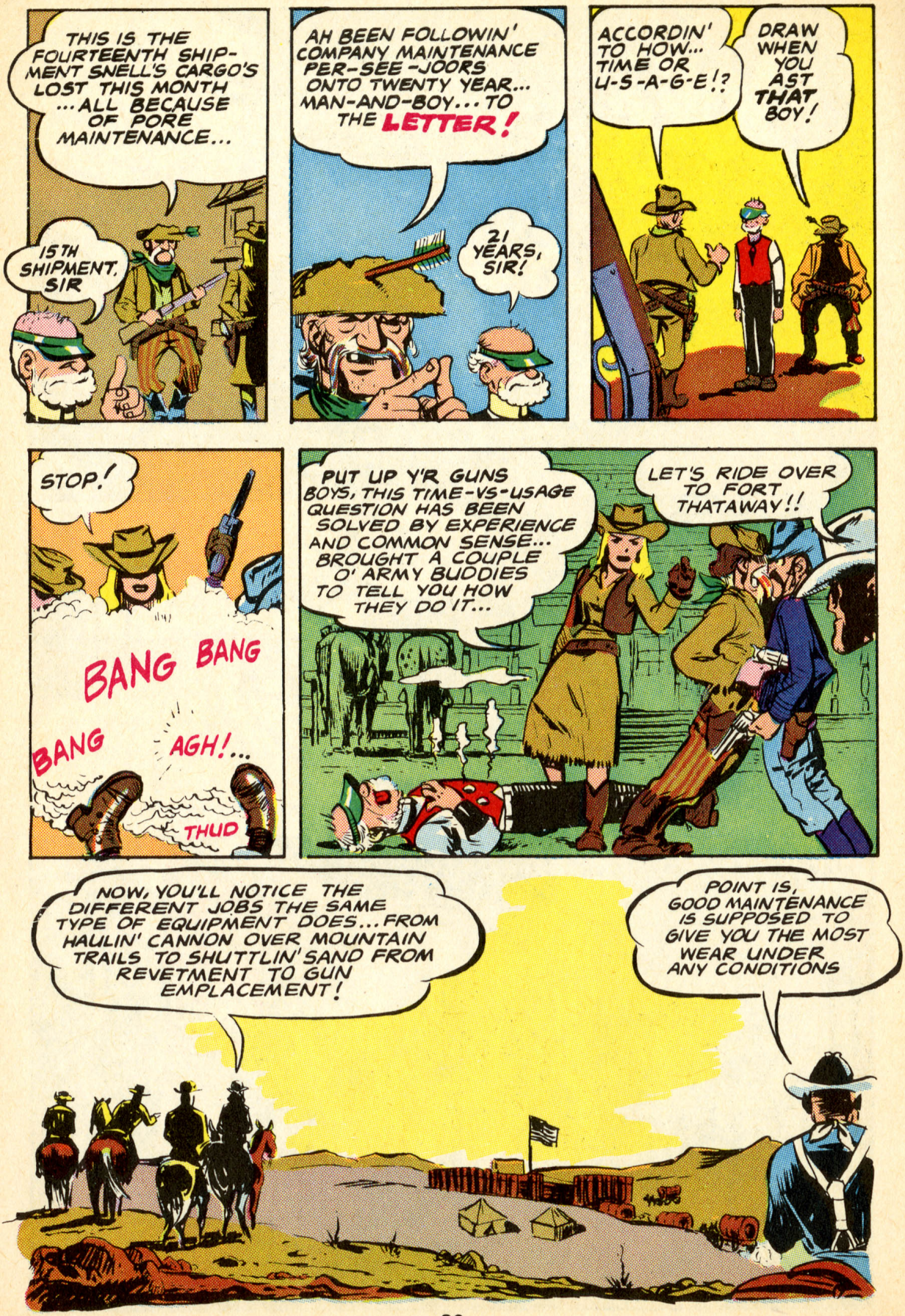
One good sure way to do it is to take a little red paint and draw a + sign on the side wall of the battery right below the + post. This is good, because it'll get less wear and tear than if it was on top of the battery post and in no way will paint come in contact with the battery post or cable clamp, to interfere with good contact.



Of course, you'll have to get the blessing of your CO to do this, but he can give it under the provisions of the maintenance paragraphs in AR 750-5. Chances are many CO's will jump at the chance, especially if they have a lot of new recruits in their outfit. This is one sure way of training those recruits as to which is a positive post and which a negative.

A little paint certainly is a lot cheaper than a whole new electrical system which has been bugged by reverse polarity.

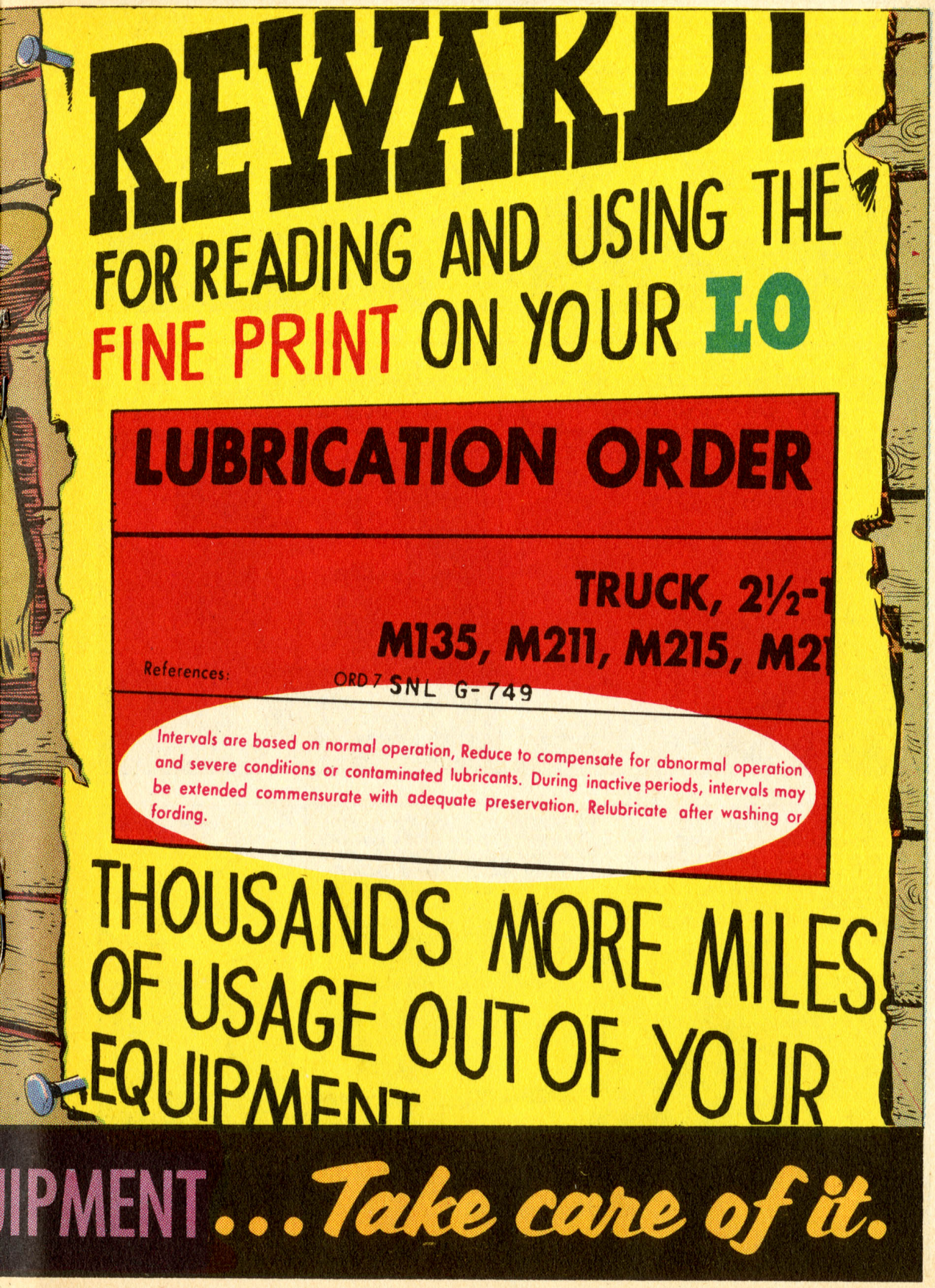
JOE'S DOPE
TIME
V.S.
USAGE
IN
THE OLD WEST.
BANG
BANG
POYNNNNG
FORT THATAWAY
DALE FACE GO HOME
HIT'S THE NOON STAGE!
HIT'S THE NOON STAGE!
BANG
BANG!
BANG!
CONSARNED POOR MAINTENANCE HAS DONE IT AGAIN!!
SNELL'S
FARGO

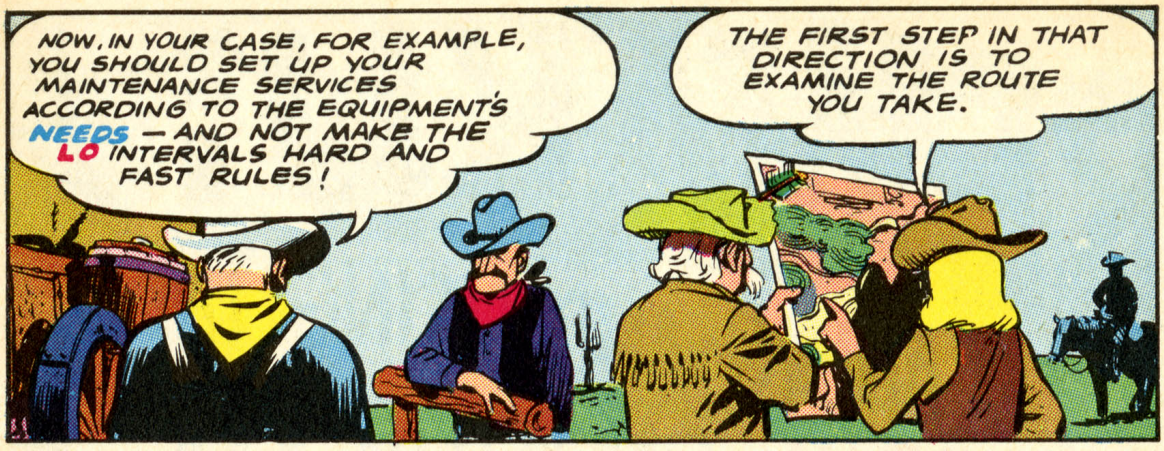

THIS IS THE FOURTEENTH SHIPMENT SNELL'S CARGO'S LOST THIS MONTH ...ALL BECAUSE OF PORE MAINTENANCE...
15TH SHIPMENT, SIR
AH BEEN FOLLOWIN' COMPANY MAINTENANCE PER-SEE-JOORS ONTO TWENTY YEAR... MAN-AND-BOY... TO THE LETTER!
21 YEARS, SIR!
ACCORDIN' TO HOW... TIME OR U-S-A-G-E!?
DRAW WHEN YOU AST THAT BOY!
STOP!
BANG BANG
BANG
AGH!...
THUD
PUT UP Y'R GUNS BOYS, THIS TIME-VS-USAGE QUESTION HAS BEEN SOLVED BY EXPERIENCE AND COMMON SENSE... BROUGHT A COUPLE O' ARMY BUDDIES TO TELL YOU HOW THEY DO IT...
LET'S RIDE OVER TO FORT THATAWAY!!
NOW, YOU'LL NOTICE THE DIFFERENT JOBS THE SAME TYPE OF EQUIPMENT DOES... FROM HAULIN' CANNON OVER MOUNTAIN TRAILS TO SHUTTLIN' SAND FROM REVETMENT TO GUN EMPLACEMENT!
POINT IS, GOOD MAINTENANCE IS SUPPOSED TO GIVE YOU THE MOST WEAR UNDER ANY CONDITIONS

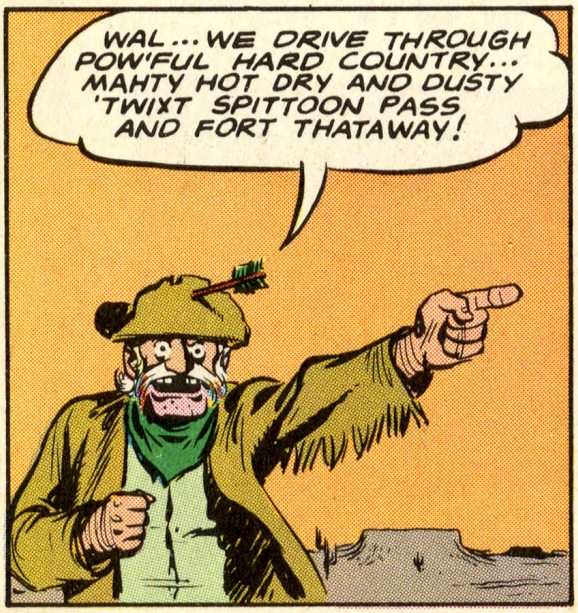
RIGHT... THE ARMY HAS NEVER USED ANYTHING BUT THE USAGE FACTOR IN MAINTENANCE ... MISINTERPRETATION HAS LED TO THIS MILEAGE (OR TIME) BUSINESS!
EXCEPT FOR GEAR IN STORAGE ...THERE IT'S TIME THAT'S THE GUIDE FOR MAINTENANCE FREQUENCY!
OH, YEAH? HOW ABOUT THE LO?
IF YOU'LL READ THE SMALL TYPE ON MOST LO'S, YOU'LL FIND THIS CLEARLY SETTLED... SEE?
"intervals are based on normal operation."
. . . which means it depends on how and where the equipment is used. This is usage—not time.
BUT THOSE LO'S ALSO HAVE A TIME INTERVAL, SIR!
TRUE... BUT THIS TIME INTERVAL IS ONLY A GUIDE TO THE LEAST YOU CAN DO IN MAINTENANCE... HUMAN NATURE BEING WHAT IT IS -- FOLKS MADE THE GUIDE SEEM LIKE AN INFLEXIBLE LAW... ACTUALLY, LO INTERVALS ARE THE MAXIMUM TIME BETWEEN PM SERVICES, AND DON'T MEAN YOU CAN'T PERFORM MAINTENANCE MORE OFTEN.
BETTER POST THIS NOW 'AFORE WE F'RGET

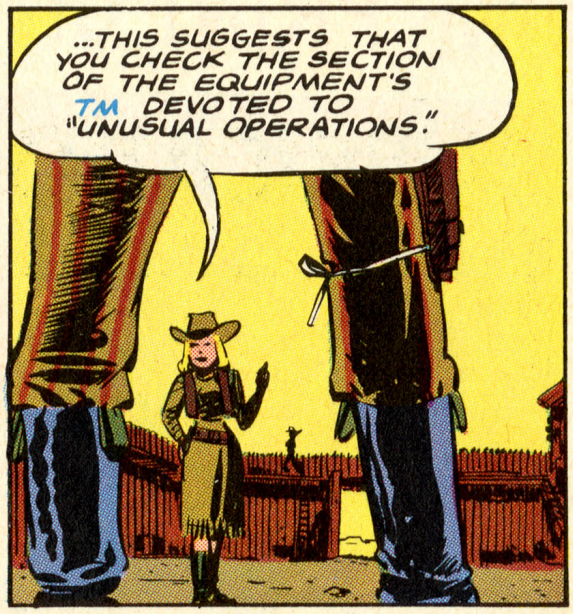
JOE's Dope Sheet
NO matter what gear you maintain...
It's the wear, and the tear, and terrain
which decide when and where
you should give that gear care.
Sure, use your LO...and your brain.
WE HAVE THE WORLD'S BEST EQU

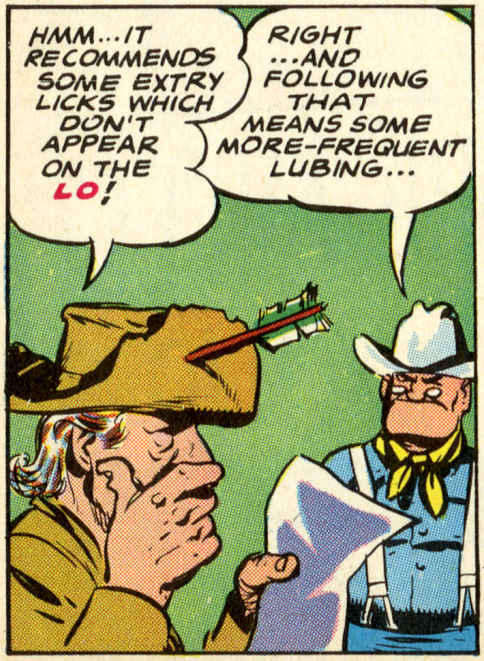
JOE'S Dope Sheet
NO matter what gear you maintain... It's the wear, and the tear, and terrain which decide when and where you should give that gear care. Sure, use your LO...and your brain.
REWARD!
FOR READING AND USING THE FINE PRINT ON YOUR LO
LUBRICATION ORDER
TRUCK, 2½-T
M135, M211, M215, M2
References: ORD 7 SNL G-749
Intervals are based on normal operation, Reduce to compensate for abnormal operation and severe conditions or contaminated lubricants. During inactive periods, intervals may be extended commensurate with adequate preservation. Relubricate after washing or fording.
THOUSANDS MORE MILES OF USAGE OUT OF YOUR EQUIPMENT
WE HAVE THE WORLD'S BEST EQUIPMENT...Take care of it.

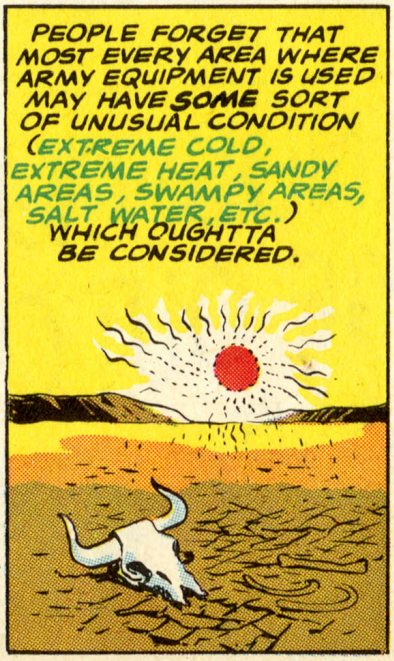

REWARD!
FOR READING AND USING THE
FINE PRINT ON YOUR LO
LUBRICATION ORDER
TRUCK, 2½-T
M135, M211, M215, M21
References: ORD 7 SNL G-749
Intervals are based on normal operation, Reduce to compensate for abnormal operation and severe conditions or contaminated lubricants. During inactive periods, intervals may be extended commensurate with adequate preservation. Relubricate after washing or fording.
THOUSANDS MORE MILES
OF USAGE OUT OF YOUR
EQUIPMENT
IPMENT... Take care of it.


NOW, IN YOUR CASE, FOR EXAMPLE, YOU SHOULD SET UP YOUR MAINTENANCE SERVICES ACCORDING TO THE EQUIPMENT'S NEEDS — AND NOT MAKE THE LO INTERVALS HARD AND FAST RULES!
THE FIRST STEP IN THAT DIRECTION IS TO EXAMINE THE ROUTE YOU TAKE.

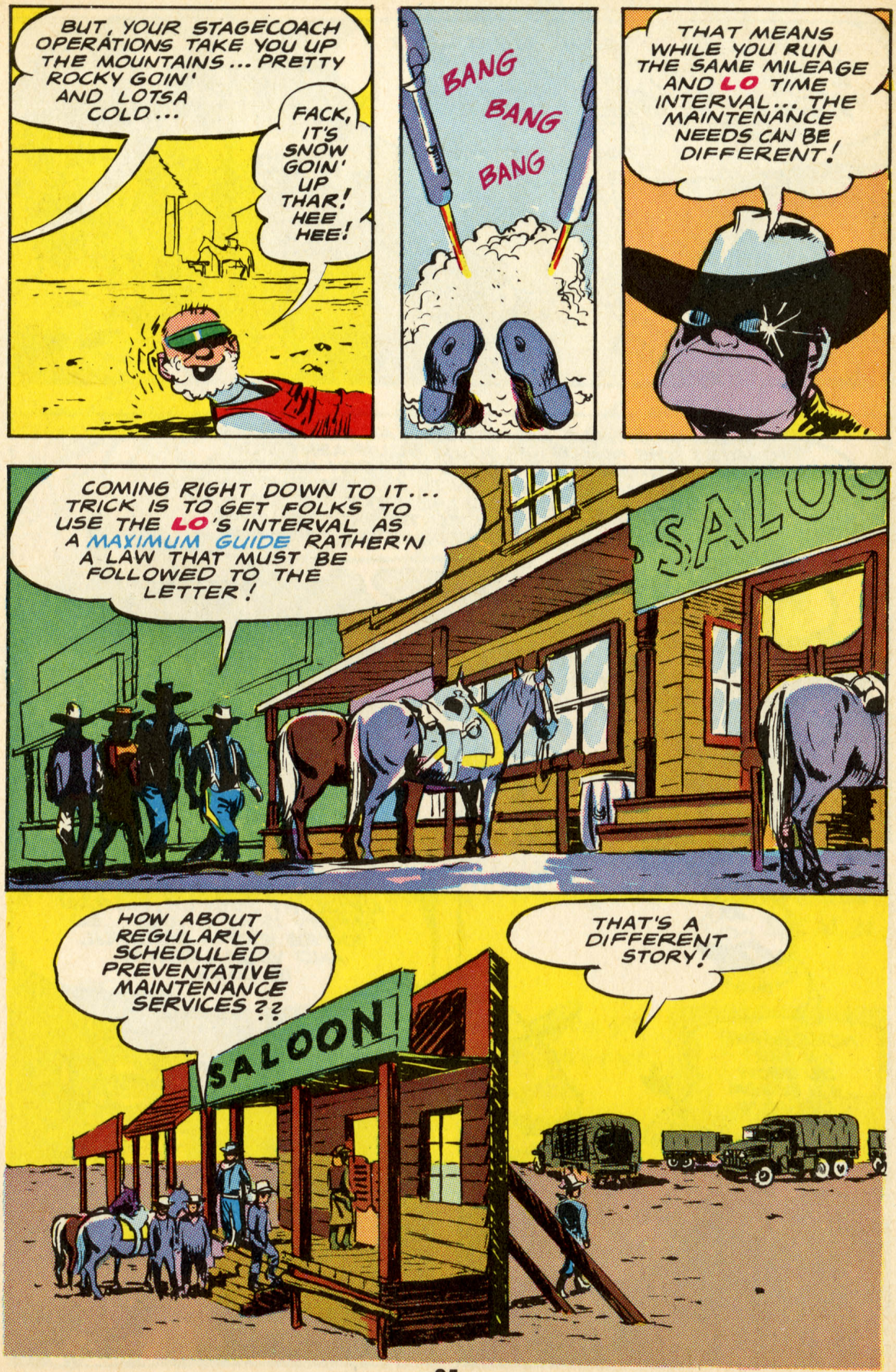

WAL... WE DRIVE THROUGH POW'FUL HARD COUNTRY... MAHTY HOT DRY AND DUSTY 'TWIXT SPITTOON PASS AND FORT THATAWAY!

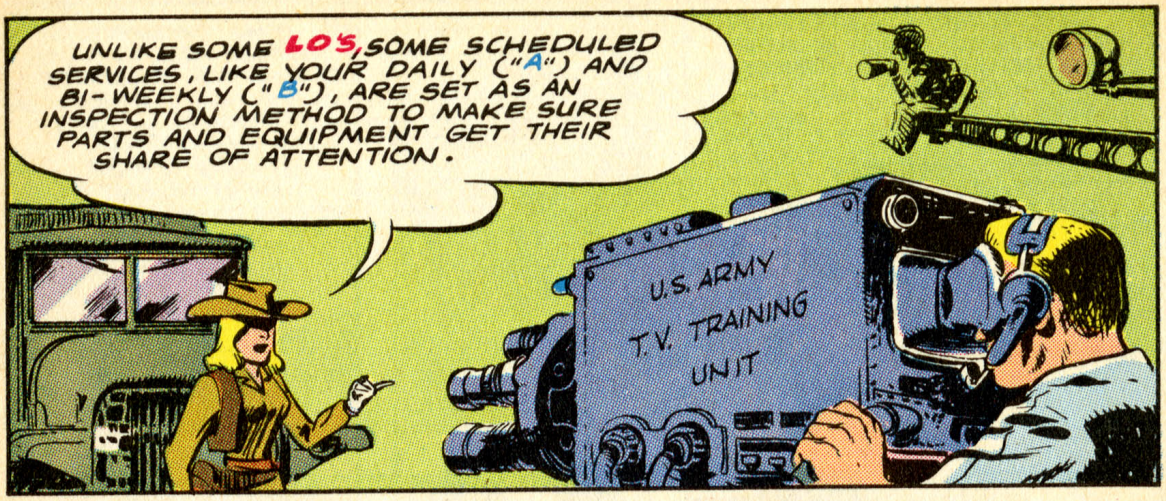

...THIS SUGGESTS THAT YOU CHECK THE SECTION OF THE EQUIPMENT'S TM DEVOTED TO "UNUSUAL OPERATIONS."

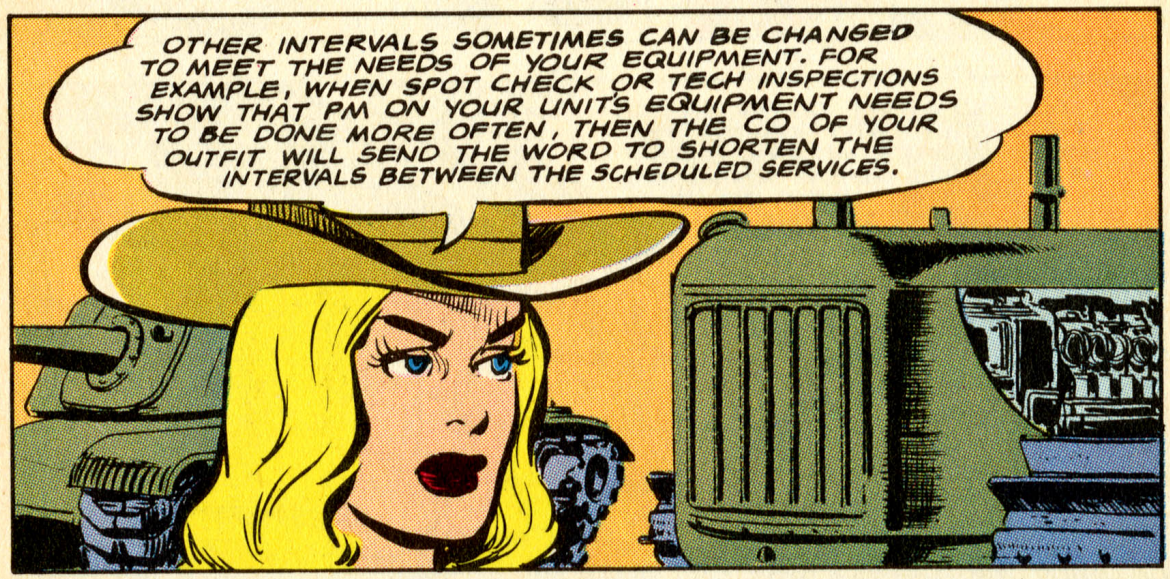

HMM... IT RECOMMENDS SOME EXTRY LICKS WHICH DON'T APPEAR ON THE LO!
RIGHT ...AND FOLLOWING THAT MEANS SOME MORE-FREQUENT LUBING...

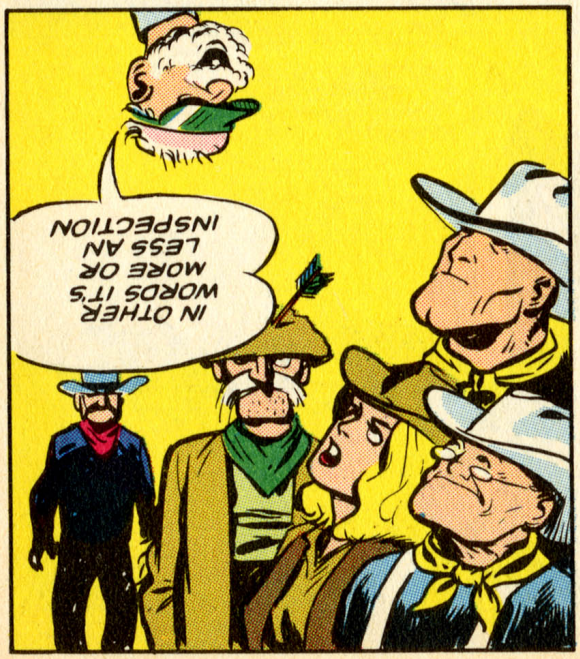

PEOPLE FORGET THAT MOST EVERY AREA WHERE ARMY EQUIPMENT IS USED MAY HAVE SOME SORT OF UNUSUAL CONDITION (EXTREME COLD, EXTREME HEAT, SANDY AREAS, SWAMPY AREAS, SALT WATER, ETC.) WHICH OUGHTTA BE CONSIDERED.

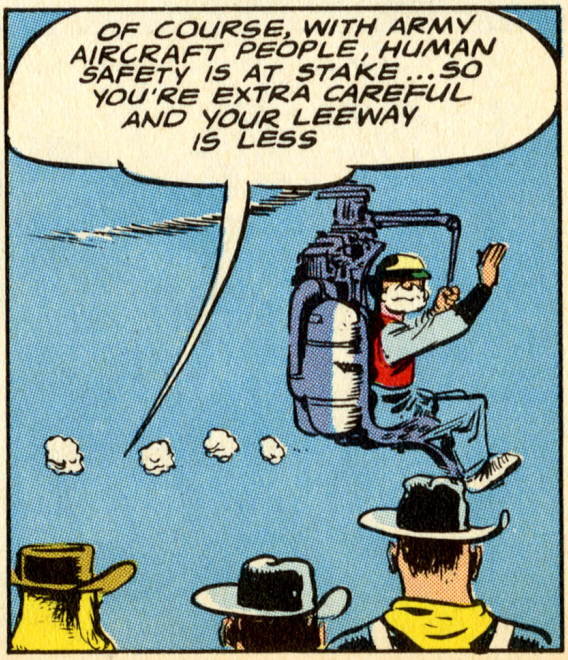
AH BEEN USING THE SAME LO FOR ME SURREY. IT ONLY RUNS AROUND TOWN, BUT GETS LOTS OF MILEAGE.


BUT, YOUR STAGECOACH OPERATIONS TAKE YOU UP THE MOUNTAINS... PRETTY ROCKY GOIN' AND LOTSA COLD...
FACK, IT'S SNOW GOIN' UP THAR! HEE HEE!
BANG
BANG
BANG
THAT MEANS WHILE YOU RUN THE SAME MILEAGE AND LO TIME INTERVAL... THE MAINTENANCE NEEDS CAN BE DIFFERENT!
COMING RIGHT DOWN TO IT... TRICK IS TO GET FOLKS TO USE THE LO'S INTERVAL AS A MAXIMUM GUIDE RATHER'N A LAW THAT MUST BE FOLLOWED TO THE LETTER!
SALOON
HOW ABOUT REGULARLY SCHEDULED PREVENTATIVE MAINTENANCE SERVICES??
THAT'S A DIFFERENT STORY!


UNLIKE SOME LO'S, SOME SCHEDULED SERVICES, LIKE YOUR DAILY ("A") AND BI-WEEKLY ("B"), ARE SET AS AN INSPECTION METHOD TO MAKE SURE PARTS AND EQUIPMENT GET THEIR SHARE OF ATTENTION.
U.S. ARMY
T.V. TRAINING
UNIT


OTHER INTERVALS SOMETIMES CAN BE CHANGED TO MEET THE NEEDS OF YOUR EQUIPMENT. FOR EXAMPLE, WHEN SPOT CHECK OR TECH INSPECTIONS SHOW THAT PM ON YOUR UNIT'S EQUIPMENT NEEDS TO BE DONE MORE OFTEN, THEN THE CO OF YOUR OUTFIT WILL SEND THE WORD TO SHORTEN THE INTERVALS BETWEEN THE SCHEDULED SERVICES.


IN OTHER WORDS IT'S MORE OR LESS AN INSPECTION


OF COURSE, WITH ARMY AIRCRAFT PEOPLE, HUMAN SAFETY IS AT STAKE ... SO YOU'RE EXTRA CAREFUL AND YOUR LEEWAY IS LESS

WHO CLEANS 'EM?

Dear Half-Mast,

Who is responsible for the care and cleaning of water tanks of the 1½-ton M106, M106A1 and M107A1 trailers? What kind of cleaning materials should be used?

SFC M. M.

Dear SFC M. M.,

Maintaining and cleaning those tank trailers is the job of using units . . . since the tank body is just as much a part of the trailer as the cargo-type bodies on other trailers.

Para 125 of TM 9-8226 (Apr 55) is the key. It tells how to clean out the tanks and what to use on them. The way it reads you can see that organizational maintenance people have all the tools needed for the job, except a steam jenny. The steam jenny comes in handy when a tank that carries drinking water has to be cleaned out.

In fact, tanks used for drinking water need special care. Using either solvent or mineral spirits on the insides will

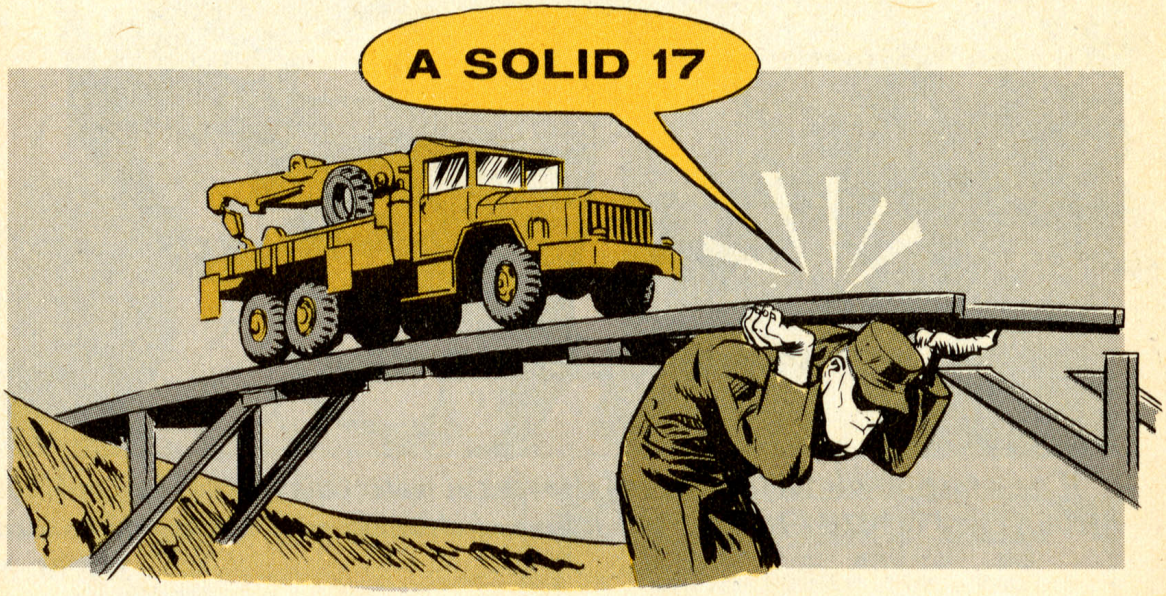
give that water a nice kerosene-like flavor that won't hurt anybody—but it'll lose a lot of friends fast-like.

The best bet for units with tanks used for drinking water is to bring their tanks to Ordnance at least twice a year for a steam cleaning . . . or as often as necessary, depending on how fast corrosion or dirt collects on the insides.

Then, the using unit can flush out the tank and disinfect it by using 5 ounces of calcium hypochlorite crystals in a tank full of water. After the solution's in the tank about 12 hours, rinse it out with clean water before pumping fresh drinking water in.

Three handy sizes on that disinfectant are the 6-oz jar, FSN 6810-264-6590; the 3¾-lb can, FSN 6810-242-4770; and the 5-lb can, FSN 6810-238-8115. Chemical Corps issues it as Calcium hypochlorite, technical.

Half-Mast



Dear Sgt Dozer,

I've always heard the vehicle classification for the 5-ton M62 wrecker is 17. On page 121 of FM 5-36, "Route Reconnaissance and Classification," it states that the classification is 21. Change 1 to the manual doesn't show any change on the M62 classification. It's still 21 in the FM. And FM 5-34, "Engineer Field Data" (June 1956) doesn't list the M62.

What gives?

Capt M. B. M.

Dear Captain M.B.M.,

You're right. The correct vehicle classification for the M62 wrecker is 17.

Sgt Dozer

WRONG PARTS

Dear Connie,

We've received some carburetors from our support for use on our M38's. We put 'em on and they run rough as a cob.

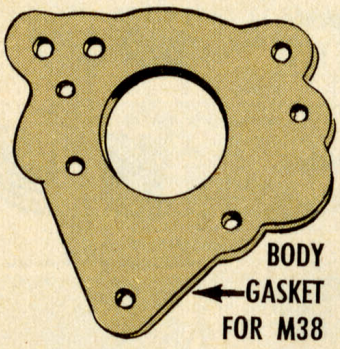
After trying to adjust 'em and after swapping a couple back to support with no better result, our support tore into one, and found that the gasket from the throttle body to the float bowl didn't seem to fit. What happened? And what do we do now?

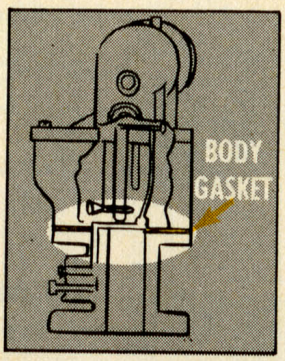
Sgt E. D. B.

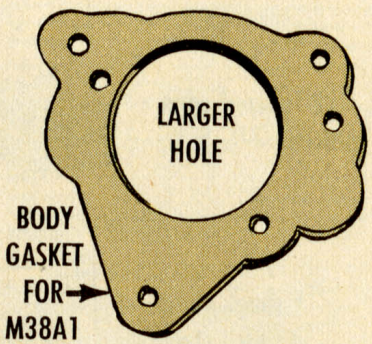
Dear Sgt E. D. B.,

I can guess what happened. Somebody got the kit, FSN 2910-040-2579 (G758) which is used to repair M38A1 carburetors by mistake, instead of kit,FSN 2910-737-2520 (G740) which should be used on the M38.

There are only five items in the kits that are different—two are gaskets.







And if an M38 carburetor is rebuilt with an M38A1 kit, it will run, after a fashion. It behaves pretty well at road speeds, but won't idle worth a hoot and shows black smoke from too rich an idle mixture. Betcha that's your problem.

And about all you can do is return the carburetor to your support unit with a UER (Form 468) explaining your troubles.

Connie

Dear Connie,

Had a rough night recently. My pneumatic mattress let me down on the cold, cold ground. It came up with a rip big enough to poke your fist through. But the real rub comes 'cause there's no patching kit issued with those inflatable mattresses.

What do I do . . . cuddle up with some rocks?

SFC M. A. B.

Dear SFC M. A. B.,

You're right. Those mattresses are issued without a patching kit, but one of these days now, they'll be coming through with their own special repair kit. But in the meanwhile, don't let that keep you awake nights. Your support unit should be able to fix you up with a couple of repair kits that'll keep you sleeping on air.

TRY ONE OF THESE:

REPAIR KIT, INNER TUBE: cold process application

(FSN 2640-272-6410) (Ord)

12 tapered edge patches, 1¼ in sq

1 sheet 15 sq in patch stock

1 tube rubber cement

REPAIR KIT, INNER TUBE: cold process application

(FSN 2640-174-1787) (Ord)

75 patches, 1¼ in sq

25 oval patches, 1½ by 2⅛ in

1 sheet 126 sq in patch stock

1 metal buffer

1 tube rubber cement

Use 'em just like the instructions on the container say.

The first one might be handier to stash away and still give you what you need.

Connie

HOLD THAT BODY STILL

Dear Half-Mast,

What's the word on the use of safety pins on dump trucks when you use these trucks for carrying troops? We've found that many times when these pins are installed, the drivers forget to take them out again when they have to use the trucks for dumping.

You can see what happens—torn-up sub-frames. How can we stop this?

SFC B. D.

Dear SFC B. D.,

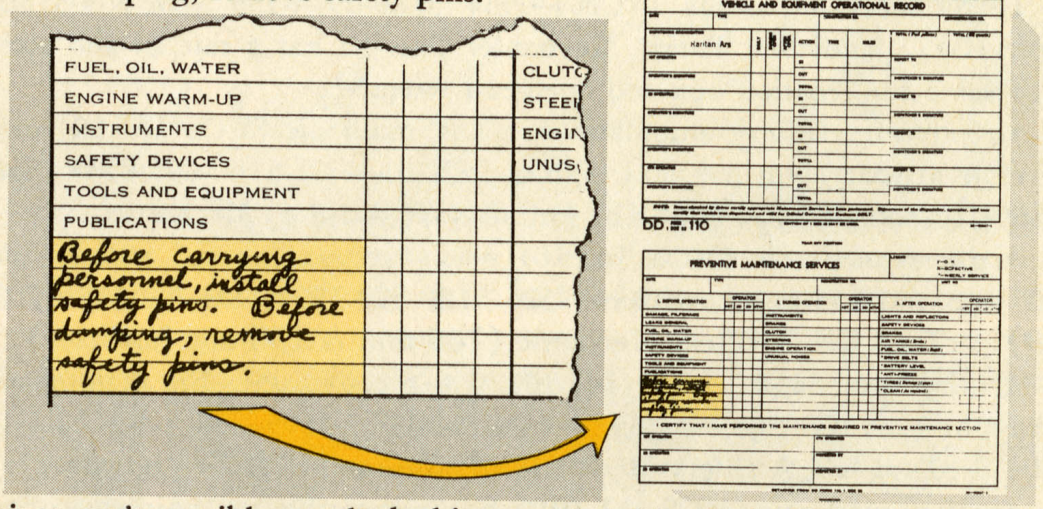
Well, one thing's sure—according to AR 385-55 (24 Feb 55), "Prevention of Motor Vehicle Accidents," whenever a dump truck's used to carry personnel, some kind of positive locking device is needed to keep that dump bed from going up accidentally.

Those safety pins are a fine idea, and will sure do the job. But, every fine idea can have a non-foolproof disadvantage—and this one seems to be forgetfulness on the part of some drivers.

So, to help remind 'em, you can use that DD Form 110. Before dispatching a dump truck, in the before-operation column, write in:

"Before carrying personnel, install safety pins."

"Before dumping, remove safety pins."



A driver can't possibly overlook this now that it's on the DD 110. It'll be right there for him to see when he's making his before-operation check, and it'll be a hard thing to explain if he forgets to remove the pins before doing any dumping.

Half-Mast

Dear Half-Mast,

The Tool Set, Artillery Minor Maintenance (Ord 6-J10-Sec. 3) is issued to turret mechanics by TOE's.

How anyone can properly work in the close quarters of a turret without box wrenches, open-end wrenches and a ratchet is beyond my imagination.

CWO E. A. H.

Dear CWO E. A. H.,

You're right. That's why this set has been deleted from the supply system. It's now being replaced by **five** sets, including one for turret mechanics, which have the particular wrenches needed for each kind of artillery they're to be used with.

According to MOS, each mechanic gets one of these:

Turret mechanic (MOS 131.10)—FSN 5180-695-0139 (SM 9-4-5180-J10-Sec. 40)**...Tool Set, Turret Mechanic.** This set has a ratchet and sockets—also some combination box and open-end wrenches.

Antiaircraft artillery automatic weapons mechanic (MOS 161.20) **or** antiaircraft artillery gun mechanic (MOS 162.20)—FSN 5180-695-0138 (SM 9-4-5180-J10-Sec. 42)**...Tool Kit, Antiaircraft Artillery Mechanic.**

Artillery mechanic (MOS 141.10) who's responsible for maintenance of 105-mm and 155-mm howitzers—FSN 5180-699-3594 (SM 9-4-5180-J10-Sec. 29)**...Tool Kit, Artillery Mechanic (105-mm & 155-mm howitzer).**

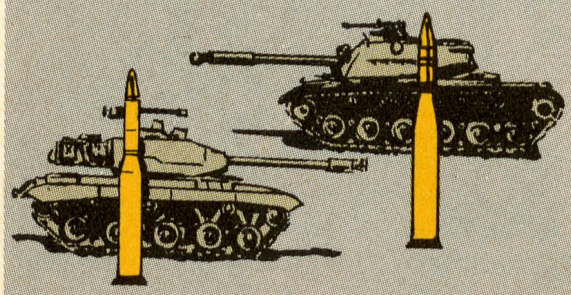
Artillery mechanic (MOS 141.10) who's responsible for maintenance of 155-mm guns and 8-in howitzers—FSN 5180-699-3595 (SM 9-4-5180-J10-Sec. 30)**...Tool Kit, Artillery Mechanic (155-mm Gun & 8-in howitzer).**

Artillery mechanic (MOS 141.10) who's responsible for maintenance of 8-in guns and 240-mm howitzers—FSN 5180-699-3601 (SM 9-4-5180-J10-Sec. 31)**...Tool Kit, Artillery Mechanic (8-in Gun & 240-mm howitzer).**

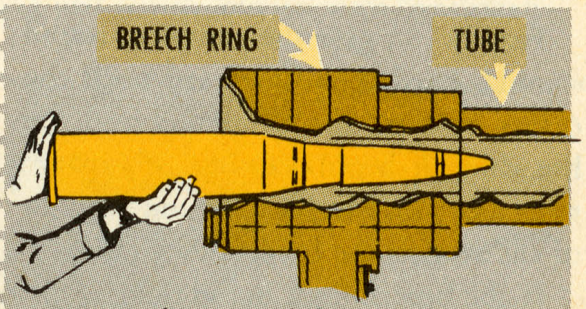
Half-Mast

FREE LOADING TIPS

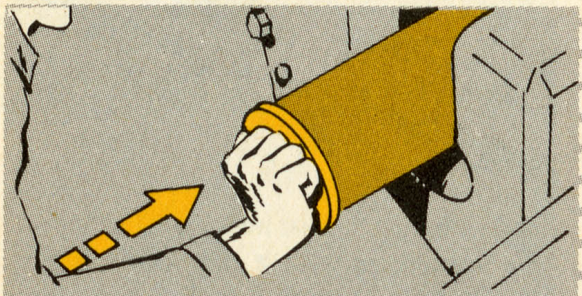
Tankers sure enough find it easier to load their big shooters when they know a few tricks of the trade.



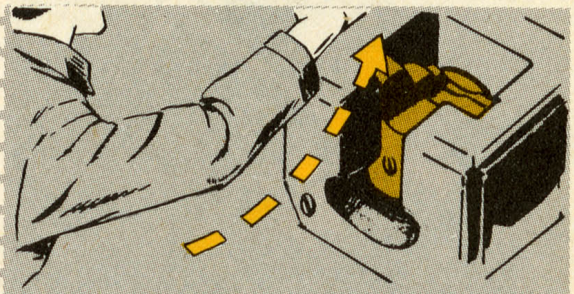
F'rinstance . . . if you're with an M41 series or an M48 series tank, you oughta know about this way of loading fixed ammo.



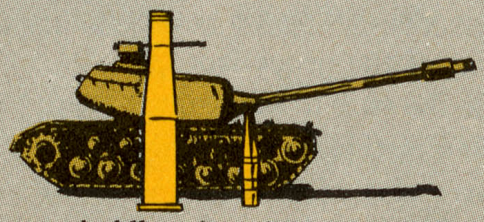
First . . . when you stick the projectile part-way in the chamber, guide it far enough so's the tube and breech ring support the weight of the round.



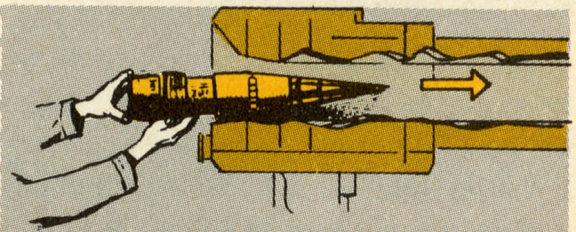
Then . . . put the heel of your clenched fist on the base of the casing and give the round a hard push straight forward.



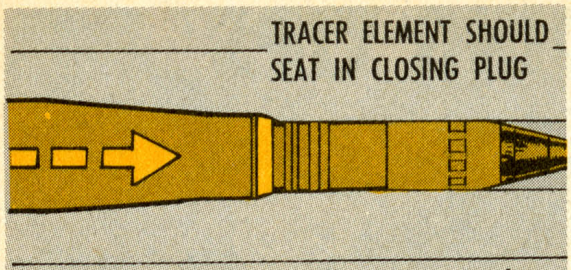
Make your hand and arm move forward and upward in a follow-through as the extractors are released and the breechblock closes.



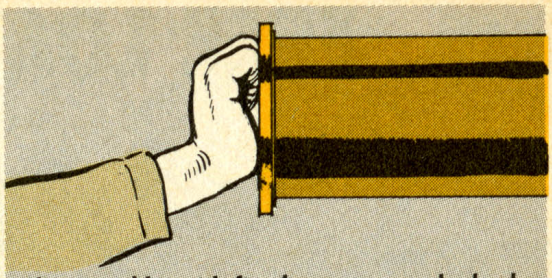
Things work differently with an M103 tank 'cause you use separated ammo.



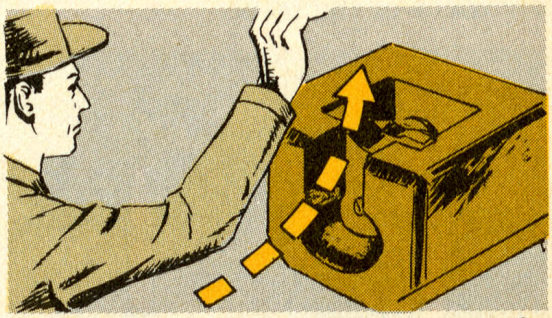
First . . . put the projectile about 18 inches of the way into the chamber.



Next . . . push the propellant casing in the chamber until the casing closing plug touches the projectile . . . and the tracer element in the projectile seats in the closing plug.

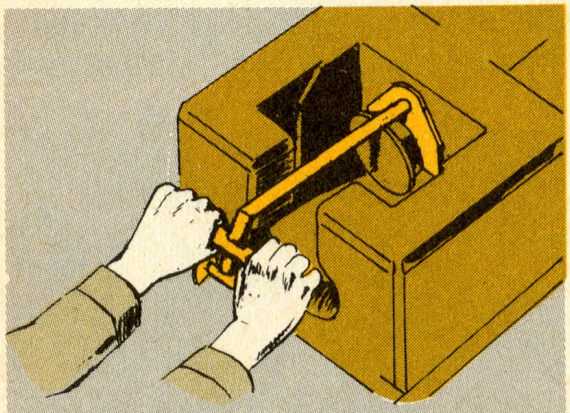


Then . . . like with fixed ammo—put the heel of your clenched fist on the base of the propellant casing so your knuckles are pointing up.



Finally . . . give the complete round a good, hard shove forward until the casing releases the extractors and the breechblock begins closing. This way, your arm and hand will be moving out of the way as the breechblock closes.

If the breechblock doesn't close, the odds are that you have a gap between the base of the projectile and the closing plug of the propellant casing.



What you do when this happens is remove the casing with your ramming and extracting tool...

and push the projectile from the rifling with the rammer and move it back to where its base is about 18 inches from the breech end of the tube. Again, put the casing in the chamber and try seating the complete round with a harder shove.

So, you can see it's mighty important that you make sure you've got no space between the projectile and the closing plug of the propellant case. In combat, it'd be a bit unhealthy for you to get outside the tank to shove out a stuck round. It's either that—or your tank's main gun out of action.

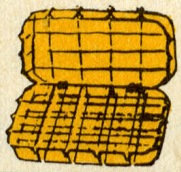
Remember one thing: Loading is only part of the job. Before you stick ammo in any chamber, make sure the ammo, chamber and breech ring parts aren't loaded with dirt and other junk. And keep outta the way of the recoil during and after loading.

ARMORERS' TOOL SET

If your MOS calls for an Armorers' Tool Set, then you know you can find the tools listed in ORD 6 SNL J-10, Section 1.

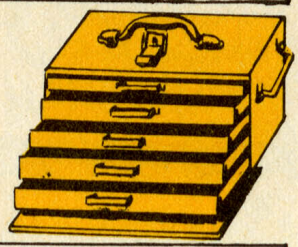
In case you're having some trouble telling just which tool fits with the description, here's how they line up.

BOX, spare parts, transparent, empty, height 1¼ in, width 4¼ in, lgth 7¼ in.



2 in set. FSN 5140-449-6851

BOX, Tool and spare parts, S, Type V, Class A.



2 in set. FSN 5140-449-6856

CAP, VISE JAW: cop (Formerly Jaw): 2 in.

FSN 5120-250-4747

CHISEL, COLD, HAND: ⅜ in cut, 5½ in lg.

FSN 5110-242-3457

DRIFTPIN: br: 3/16 in pt diam, ¼ in diam, 4 in lg.

FSN 5120-239-0035

FILE, HAND: AS, fl: sm cut, 6 in pt to shoulder.

FSN 5110-234-6532

FILE, HAND: AS, rd: sm cut, 6 in pt to shoulder.

FSN 5110-234-6550

FILE, AS, taper: slim, sgle-cut 6 in pt to shoulder.

FSN 5110-234-6528

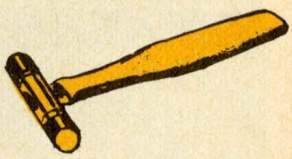
HAMMER, HAND: 11/16 in diam, 1 15/16 in lg, 3 oz.

FSN 5120-242-3908

HAMMER: HAND: machst's, ball peen: ½ lb.

FSN 5120-242-3913

HAMMER, inserted face, plastic: 1 in hd diam, 3½ in hd lgth, 5 oz, w/2 ea soft, med, tough and nylon faces.

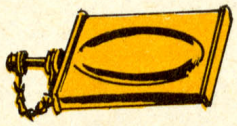


FSN 5120-357-6074

HANDLE, FILE, WOOD: small size, 1 in diam of hand grip.

3 in set. FSN 5110-263-0342

YOUR TOOLS MAY NOT LOOK **EXACTLY** LIKE THESE, 'CAUSE DIFFERENT MANUFACTURERS SOMETIMES MAKE THE SAME TOOL A LITTLE DIFFERENT.

OILER, HAND: spg bottom, S, stght spout w/ cap and chain, 3 oz cap.
2 in set.

FSN 4930-449-7171

PLIERS: side-cutt, lg rd nose, 6 in lg.

FSN 5120-247-5177

PLIERS: parallel action jaws, lgth 6½ in.

FSN 5120-224-1541

PUNCH, CENTER: ⅜ in diam, 4½ in lg.

FSN 5120-293-3509

PUNCH, DRIVE PIN: 0.03 in diam pt 3 in lg.
4 in set.

FSN 5120-223-1019

PUNCH, DRIVE PIN: 0.05 in diam pt 3 in lg.

FSN 5120-223-1020

PUNCH, DRIVE PIN: std: 3/32 in diam pt.

FSN 5120-242-3435

SCREWDRIVER, POCKET: 1¾ in blade, ¼ in tip, 4 in lg.

FSN 5120-596-8502

SCREWDRIVER, COMMON: 3 in blade, 3/16 in tip, 7 in lg.

FSN 5120-237-6985

SCREWDRIVER, COMMON: 4 in blade, ¼ in tip, plastic hdl, flared tip.

FSN 5120-222-8852

SCREWDRIVER, COMMON: wood hdl: 2 in blade, 0.125 in tip, .6 in lg.

FSN 5120-293-3180

STONE, SHARPENING: artificial, No. 3, ⅜ x 4 in.

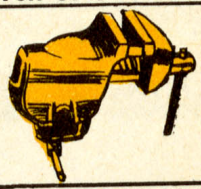
FSN 5345-224-6595

STONE, SHARPENING: unmounted, artificial, sq, fine, No. 4, ⅜ x ⅜ x 4 in.

FSN 5345-243-6082

STONE, SHARPENING: unmounted, natural, sq, hard, ¼ x ¼ x 3½ in.

FSN 5345-243-6087

VISE, BENCH, CLAMP BASE: 2 in jaw sw, 2 in jaw opng.

FSN 5120-293-3450

WRENCH, OPEN END ADJUSTABLE: 15/16 in jaw opng, 8 in lg.

FSN 5120-240-5328

WRENCH, SOCKET HEAD SCREW: hex: ⅛ in hex.

FSN 5120-240-5292

WRENCH, SOCKET HEAD SCREW: hex: 3/16 in hex.

FSN 5120-240-5300

WRENCH, SOCKET HEAD SCREW: hex: 5/16 in hex.

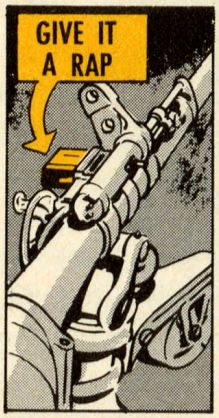
FSN 5120-240-5274

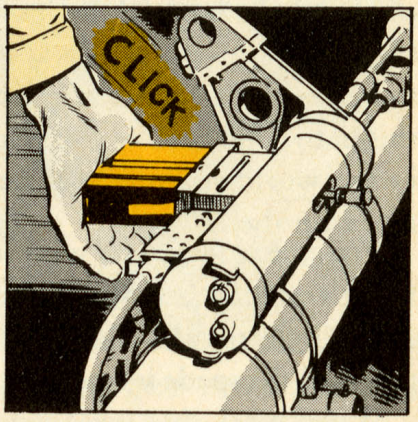
GETTING THE MOST OUT OF YOUR SPOTTING RIFLE . . .

Does your M8 or M8C .50-cal spotting rifle have the magazine "falling-out-blues"?

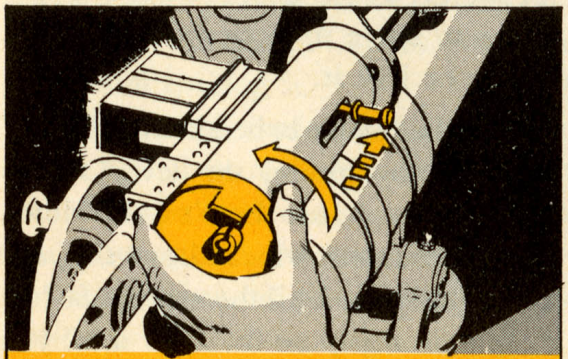
The reason it falls out? The magazine isn't being seated with enough force to overcome the magazine spring pressure . . . the top round has to be depressed enough to let the magazine seat itself.

You have the answer in the palm of your hand . . . fact is it is your palm. Use it to rap the magazine after you put it in the receiver. There're two ways to tell if the magazine is rapped tight—a click will tell you the magazine catches have grabbed hold . . . and a yank on the magazine lets you know if it moves any.





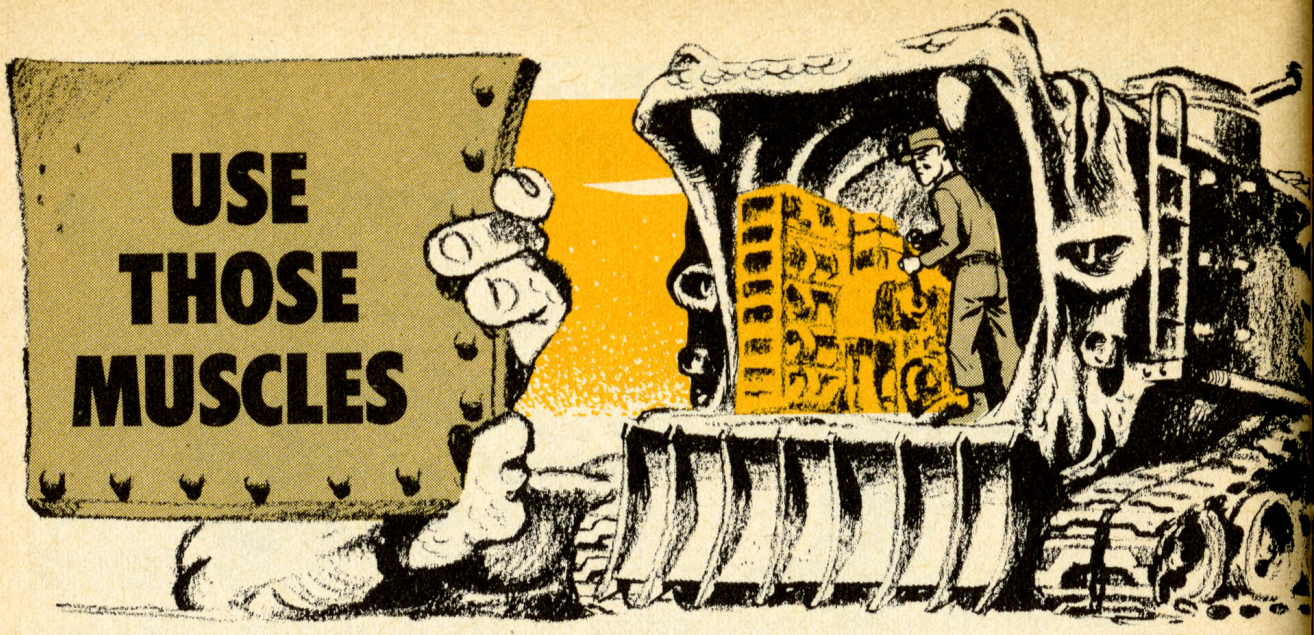
There're two ways to remove the buffer assembly from the spotting rifle—the right way and the wrong way.



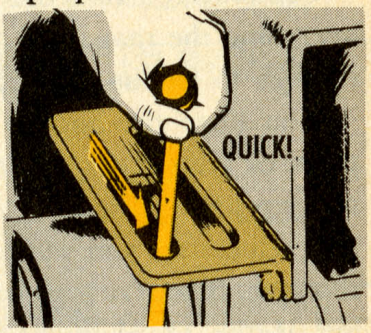
The right way is first to make sure the bolt is forward and clear of the buffer assembly.

The wrong way is to have the bolt to the rear—'cause as you rotate the buffer assembly to get it out of the receiver, the raised section of the buffer disk will be battered as it catches on the bolt.

USE THOSE MUSCLES



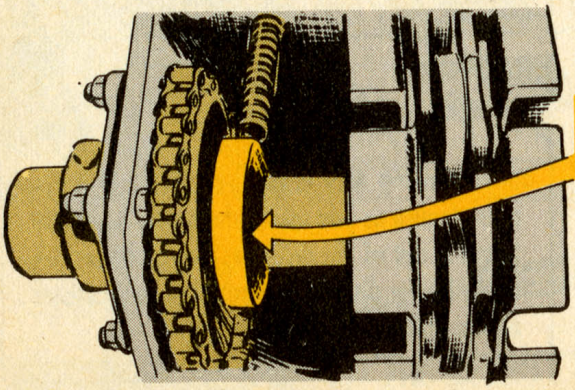
The muscles in your arm, that is—next time you go to raise the spade on either the M53 (T97) self-propelled gun or M55 (T108) self-propelled howitzer.



Seems some Joes have been a bit too gentle when moving the power selector lever for the rammer and spade hoist into the HOIST position. They've been working that lever real slow and jerky-like, so's to raise the spade a couple inches at a time. But when it comes to this baby, that kind of pamper treatment is the best way in the world to burn out the electrical contact points and ruin the motor.

Y'see, that lever acts with the motor just like any ordinary electric light switch. What's needed is a firm follow-through push on that lever so you can make a definite electrical contact—to turn on the motor and hold the selector lever in place 'til the spade is raised.

If you work that lever too easy or too jerky, you won't set up the electrical contact you need. Instead of a steady flow of current, you'll be getting spotty contact ...which means more wear and tear on the motor, not to mention burned contacts. Remember, too, that the spade is going to move up into position at the same rate of speed whether you snap the lever or jerk it.



You don't have to be afraid of hurtin' anything by giving the lever a firm push, either, 'cause there's a slip clutch on the head shaft which allows slippage when the spade is all the way up. So just keep a firm grip on the lever until you hear the spade bang against the rear of the vehicle—then you know that the latches on the vehicle have secured the

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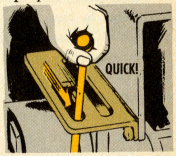

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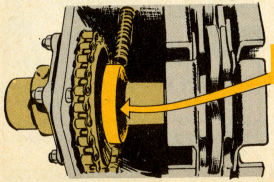

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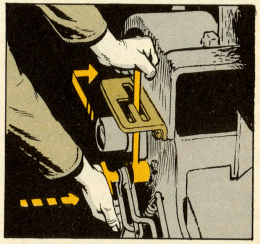
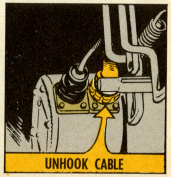
After the spade is up, push the shifter shaft handle back to mechanical NEUTRAL position. You might want to put a sticker on the top of your rammer hood saying, "Always return the shifter shaft handle to NEUTRAL after using."



'Nother thing to keep in mind 'bout the shifter shaft handle. And that's to be sure it's in the NEUTRAL position when you go to lower the spade. Here's why: If the shifter coupling is not in neutral position, the gear ratio is enough to spin the armature fast enough to break wires from the armature segments.

To lower the spade, put your shifter shaft handle in NEUTRAL, the power selector lever in NEUTRAL, lift up on your brake handle, and slowly lower the spade with the brake. Unhook your spade cable before backing into position to keep from ruining it.

One final tip—a safe way for you to keep healthy and in one piece is to make sure that the electrical cable attached to the electric motor is unhooked except when you're using it. Otherwise, anyone or anything accidentally jarring the power selector lever can make the projectile rammer act real nasty and hit anything in its path. You also want to check and see that the hoist cable and hook are tightly in place, else jarring the power selector lever'll cause trouble there, too.



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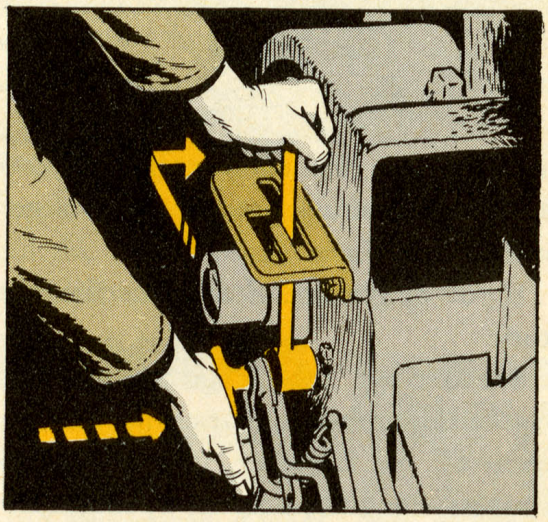

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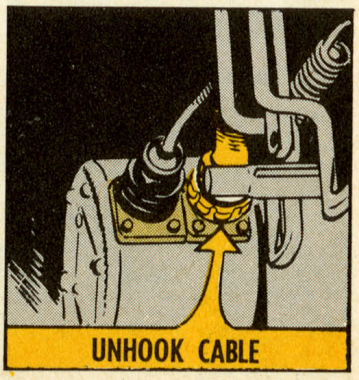
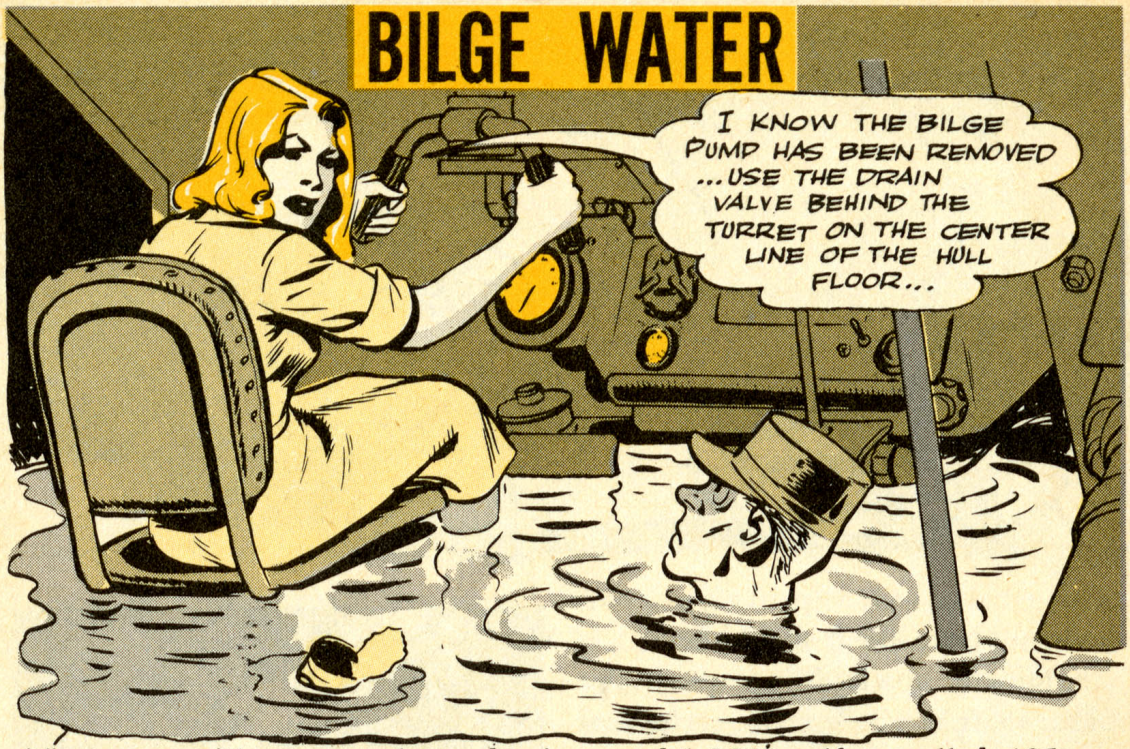
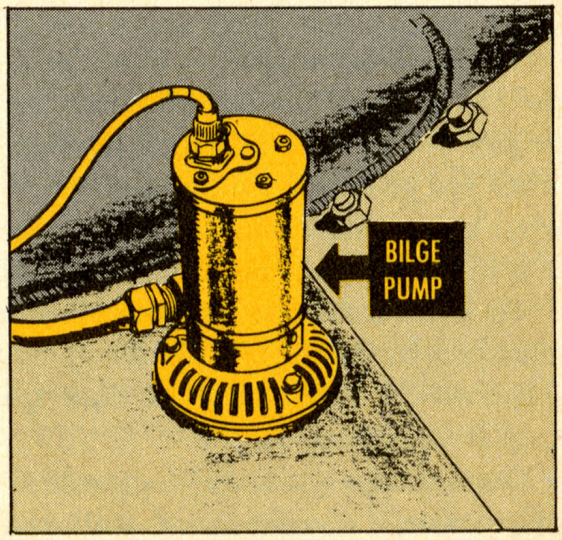




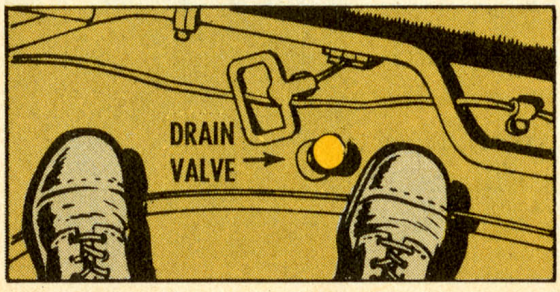
There are still some early-production model M52 self-propelled 105-mm howitzers running around with bilge pumps on 'em. Thought these went out with button shoes.

If you've got one of these earlier vehicles and still have the pump, here's the story:



When your vehicle goes back for overhaul or rebuild, that pump will be taken off. If, however, you're having trouble with the pump now, might as well take it off like it shows in TM 9-7204, and return it to supply because you won't be able to get parts to fix that pump up.

As far as draining the crew compartment of that vehicle when the bilge pump's off, this can be done through the drain valve located behind the turret on the center line of the hull floor. Check that valve often and keep it clean—just to make sure it doesn't rust or corrode up. If this happens, you may find yourself slopping around in water with no way of getting it out, except by hand and pail.

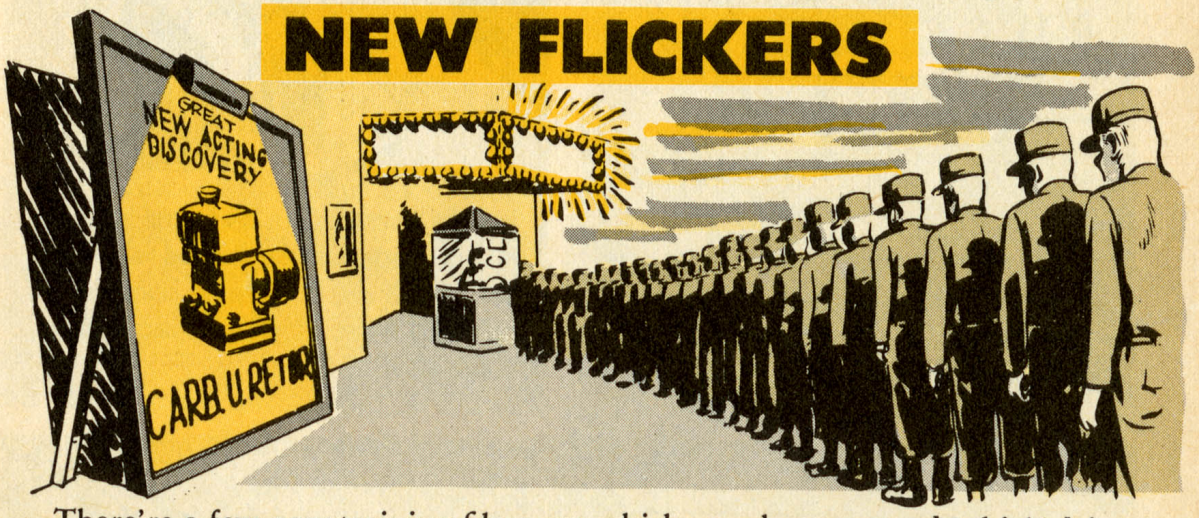


SEEIN'S BELIEVIN'

Whaddaya mean you can't get repair parts for items that Ordnance MWO's put on your equipment because there's no supply manual for 'em yet? Sounds like you haven't looked at SB 9-150 (28 June 1957).

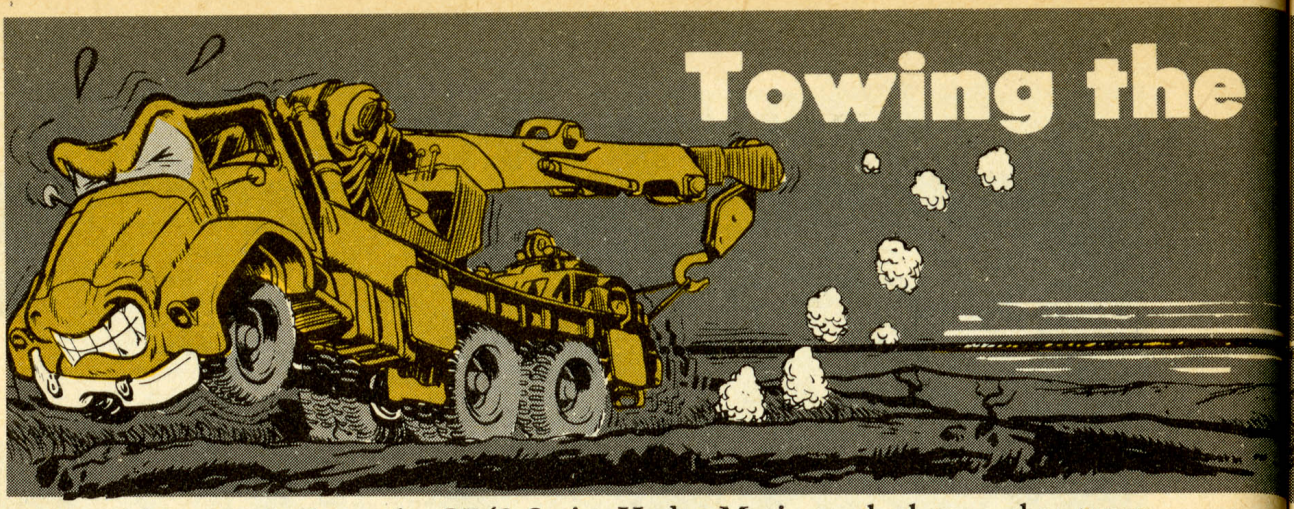
The MWO itself is your authority for ordering the parts as long as the parts have stock numbers . . . and the SB gives the supply people the authority for getting 'em to you. Use both the SB and the MWO numbers on your requisition. And get the SB . . . it has a lotta other scoop worth eyeballing.

NEW FLICKERS



There're a few new training films out which you shop men and vehicle drivers may want to see.

TF 9-2535 shows how to operate the winch of the G749-series 2½-ton trucks. TF 9-2536 gives the lowdown on adjusting the idle mixture of the carburetors used on your G749- and G742-series 2½-ton trucks. TF 9-2537 lays out the dope on checking and adjusting the ignition timing on your GMC 302 engines. And TF 9-2541 and TF 9-2542 give out with poop on how to get your wheeled and tracked vehicles ready for deep-water fording.

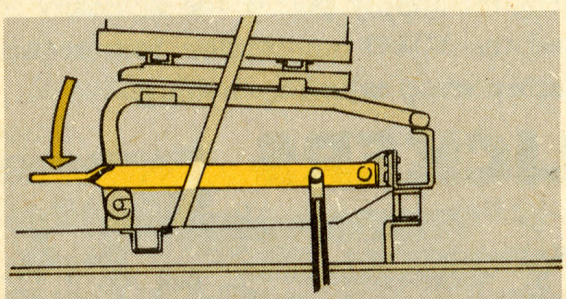


Towing the

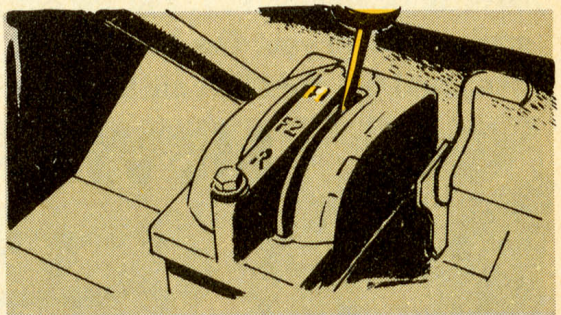
As all of you who have the G749-Series Hydra-Matic trucks know, that transmission is strictly something special. It will do an awful lot for you that no other transmission can do.

However, it also requires certain special treatment. And, in particular, whenever you have to tow your truck, you can't tow the truck for any distance with that transmission turning over—or wear and destruction will take place.

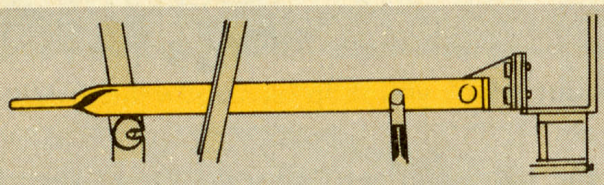
So, whenever you've got to tow a Hydra-Matic truck there're special chores to be done. And the type of chores depend on the distance and how you're towing the lame truck.



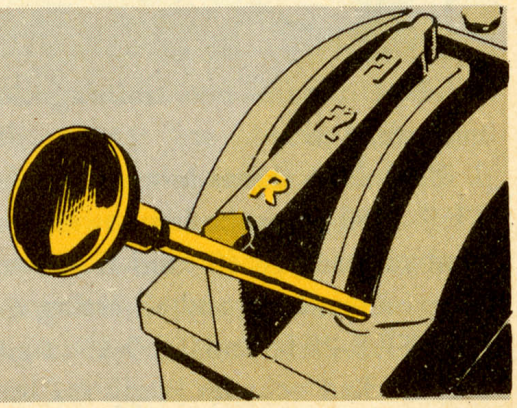
For distances up to 10 miles—with any towing hook-up, all you need to do is place the transfer case lever into the DOWN-NEUTRAL position



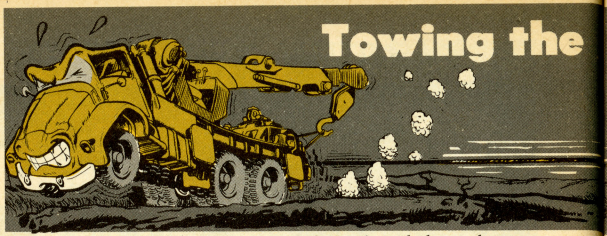
and the transmission shift-control-lever into NEUTRAL position in the disabled vehicle. You never pull it over 15 miles an hour, and you never pull it over 10 miles distance with this setup.



To tow it backward, like backing it into a stall, keep the transfer in DOWN-NEUTRAL position and the shift lever in R (Reverse).



Towing the Hydra-Matic Trucks



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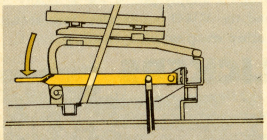

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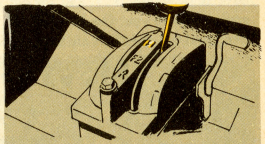

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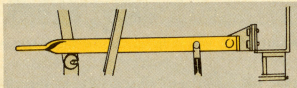

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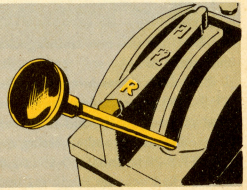
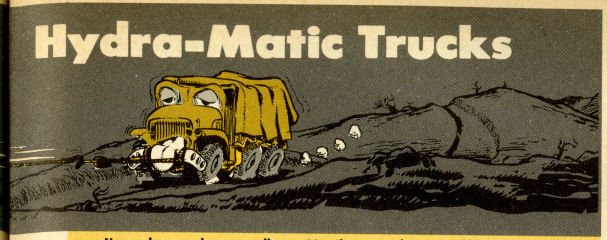
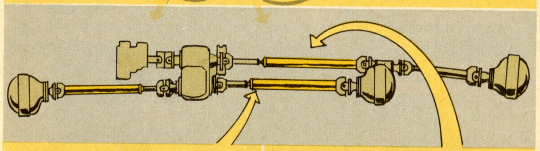


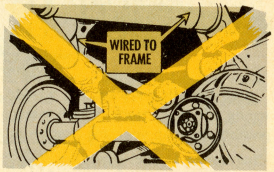


Now, when you have to pull over 10 miles, more chores are added and the towing hook-up decides what you'll do. If you're towing with all the wheels on the ground, you've got to remove the front and the two rear propeller shafts from the truck.



One rear shaft runs from the transfer case to the forward rear axle differential carrier...

... the other propeller shaft runs from the transfer case to the pillow block mounted on the forward rear axle assembly.

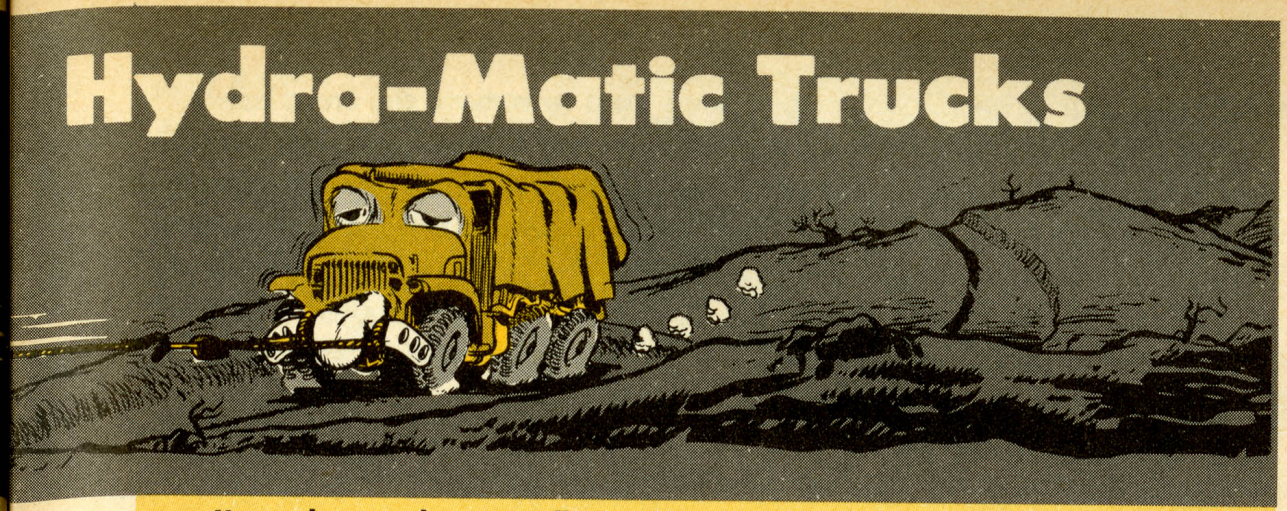


The safest way to treat these shafts is just like TM 9-8024 says. Remove them and put them in the bed of the truck and take 'em with you. Some people have tried to save time by taking them loose at the differential carrier and at the pillow block and then wiring them up to the frame out of the way. This is all right unless you should forget and drop the front wheels on the ground with the drive flanges in, or somebody should try to start the engine or move the truck like that—in which case, the shafts could whip around and be broken.

The safest way is to remove them completely and stow them in the truck.

Now, if you're going **to tow with a wrecker,** you have a choice. You can lift the rear wheels off the ground—in which case you remove only the front propeller shaft—or if you're going to tow with the front wheels off the ground, you

Hydra-Matic Trucks



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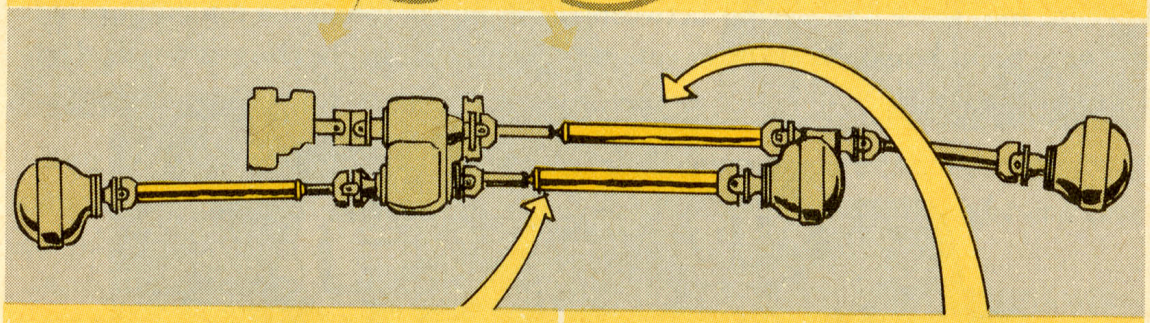

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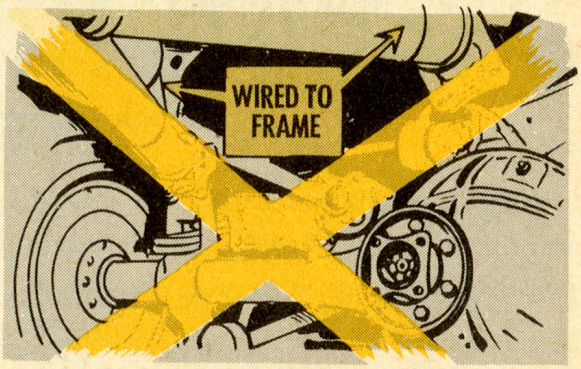

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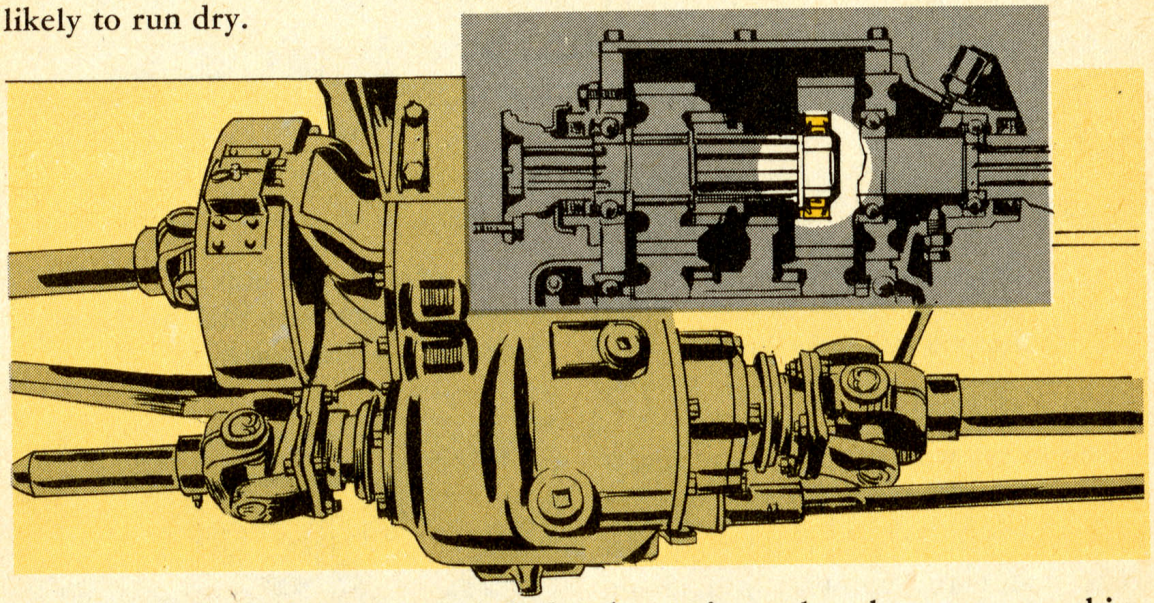
remove the rear propeller shafts but don't need to remove the front one.

These procedures seem like a lot of work, but they'll make sense to you when you understand that the forward drum of your Hydra-Matic transmission turns at approximately 8 times the road speed of the wheels when the transmission is in neutral and being towed. If the truck is towed too fast, pressure from the output pump builds up and attempts to apply the band to this drum—resulting in rapid burn-out of the transmission. That's why you **always** tow with the transfer case in neutral.

The reason for disconnecting the drive shafts when you're towing any G-749 truck over 10 miles is right in the transfer case.

First of all, since you're not supposed to tow faster than 15 miles an hour, the transfer case is likely to stand short on lubrication of the top shafts. The lubricant won't get splashed up on 'em as it does during normal driving.

Then, too, there's a bearing between the input shaft and the top output shaft that only turns when the transfer case is in neutral. This bearing is particularly likely to run dry.



And, last but not least, you wouldn't be towing unless there was something wrong with your truck. Which might include bent shifter linkage. This could possibly louse up your dog-clutches in the transfer.

By the way, the latest word is that instead of taking out the front wheel drive flanges, you take off the transfer-case to front-axle drive shaft. This won't let dirt into the front wheel bearings.

ARMY AIRCRAFT

Sure you got the

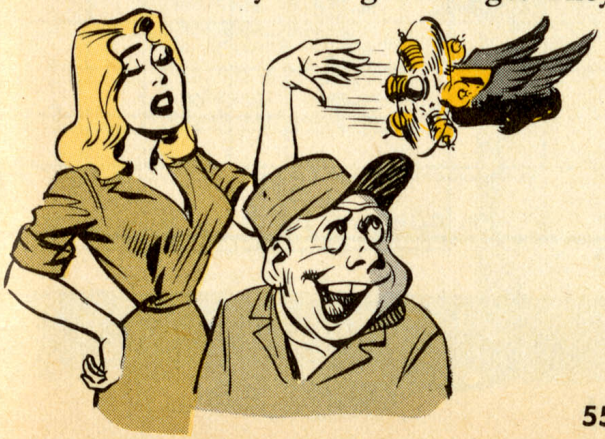
RIGHT NUMBERS?

You all know the importance of the correct numbers when the cubes are bouncin' off the wall onto the blanket. Readin' seven insteada eight can cost you plenty.

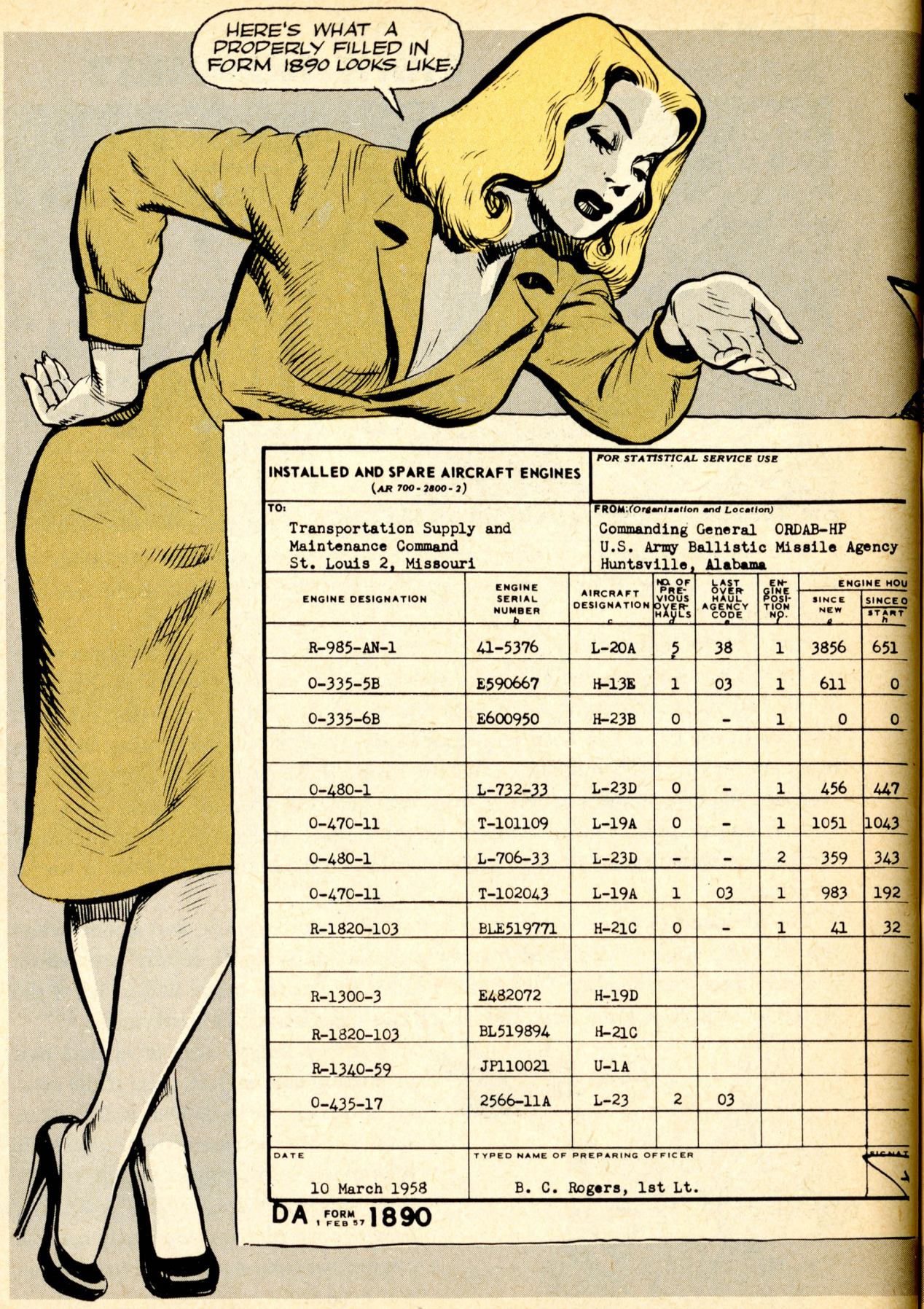
And, believe it or not, it's every bit as important to get the right numbers when you're filling out your installed and spare aircraft engine reports on DA Form 1890. Fact is, in the long run it may be more important to you. Getting the right number in the game can keep you from losing your pants. But getting the right numbers on the 1890 might save what's inside those pants.

Y'see, the information collected from those reports gives the whole picture of aircraft engine performance throughout the Army. And from this picture they can pick out patterns of failure, probable life of the engines, all kinds of useful information.

The dividend to you comes first as better and safer engines, and second when you find the engines you need for replacements arriving at supply just before you need 'em. (Remember, the engine needed in Europe today had to leave the Stateside factory a long time ago. They can't get one to you overnight.)



But, this happy sort of crystal ball predicting can only be done if the crystal ball is on the ball. That is, if the DA 1890's show the true state of affairs. If the reports show engines lasting longer than they really did, or show less flying time per month than you really use, the engine you need won't be on hand when you need it.



INSTALLED AND SPARE AIRCRAFT ENGINES
(AR 700-2800-2)

FOR STATISTICAL SERVICE USE

TO:
Transportation Supply and
Maintenance Command
St. Louis 2, Missouri

FROM: (Organization and Location)
Commanding General ORDAB-HP
U.S. Army Ballistic Missile Agency
Huntsville, Alabama

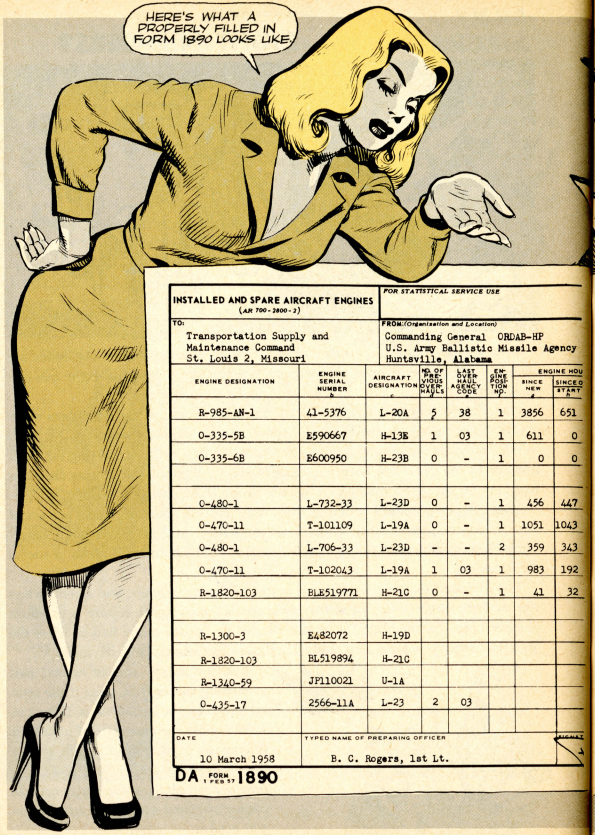
ENGINE DESIGNATION	ENGINE SERIAL NUMBER b	AIRCRAFT DESIGNATION c	NO. OF PREVIOUS OVERHAULS d	LAST OVERHAUL AGENCY CODE e	ENGINE POSITION NO. f	ENGINE HOU	
						SINCE NEW g	SINCE O START h
R-985-AN-1	41-5376	L-20A	5	38	1	3856	651
O-335-5B	E590667	H-13E	1	03	1	611	0
O-335-6B	E600950	H-23B	0	-	1	0	0
O-480-1	L-732-33	L-23D	0	-	1	456	447
O-470-11	T-101109	L-19A	0	-	1	1051	1043
O-480-1	L-706-33	L-23D	-	-	2	359	343
O-470-11	T-102043	L-19A	1	03	1	983	192
R-1820-103	BLE519771	H-21C	0	-	1	41	32
R-1300-3	E482072	H-19D					
R-1820-103	BL519894	H-21C					
R-1340-59	JP110021	U-1A					
O-435-17	2566-11A	L-23	2	03			

DATE: 10 March 1958

TYPED NAME OF PREPARING OFFICER: B. C. Rogers, 1st Lt.

SIGNAT

DA FORM 1 FEB 57 1890



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R-985-AN-1	41-5376	L-20A	5	38	1	3856	651
O-335-5B	E590667	H-13E	1	03	1	611	0
O-335-6B	E600950	H-23B	0	-	1	0	0
O-480-1	L-732-33	L-23D	0	-	1	456	447
O-470-11	T-101109	L-19A	0	-	1	1051	1043
O-480-1	L-706-33	L-23D	-	-	2	359	343
O-470-11	T-102043	L-19A	1	03	1	983	192
R-1820-103	BLE519771	H-21C	0	-	1	41	32
R-1300-3	E482072	H-19D					
R-1820-103	BL519894	H-21C					
R-1340-59	JP110021	U-1A					
O-435-17	2566-11A	L-23	2	03			

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TYPED NAME OF PREPARING OFFICER: B. C. Rogers, 1st Lt.

SIGNATURE

DA FORM 1 FEB 57 1890

PERIOD ENDING: 28 February 1958

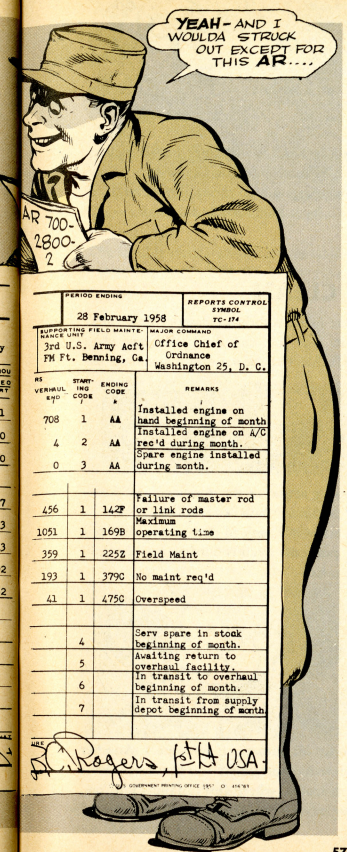
REPORTS CONTROL SYMBOL TC-174

SUPPORTING FIELD MAINTENANCE UNIT: 3rd U.S. Army Acft FM Ft. Benning, Ga.

MAJOR COMMAND: Office Chief of Ordnance Washington 25, D. C.

RS OVERHAUL END i	STARTING CODE j	ENDING CODE k	REMARKS l
708	1	AA	Installed engine on hand beginning of month
4	2	AA	Installed engine on A/C rec'd during month.
0	3	AA	Spare engine installed during month.
456	1	142F	Failure of master rod or link rods
1051	1	169B	Maximum operating time
359	1	225Z	Field Maint
193	1	379C	No maint req'd
41	1	475C	Overspeed
	4		Serv spare in stock beginning of month.
	5		Awaiting return to overhaul facility.
	6		In transit to overhaul beginning of month.
	7		In transit from supply depot beginning of month.

SIGNATURE: B. C. Rogers, 1st Lt USA



And the numbers aren't all. Those starting and ending codes are just as important, mebby more so from a safety angle. On accounta they give the "supply wheels" a good check on the engine design and the overhaul people.

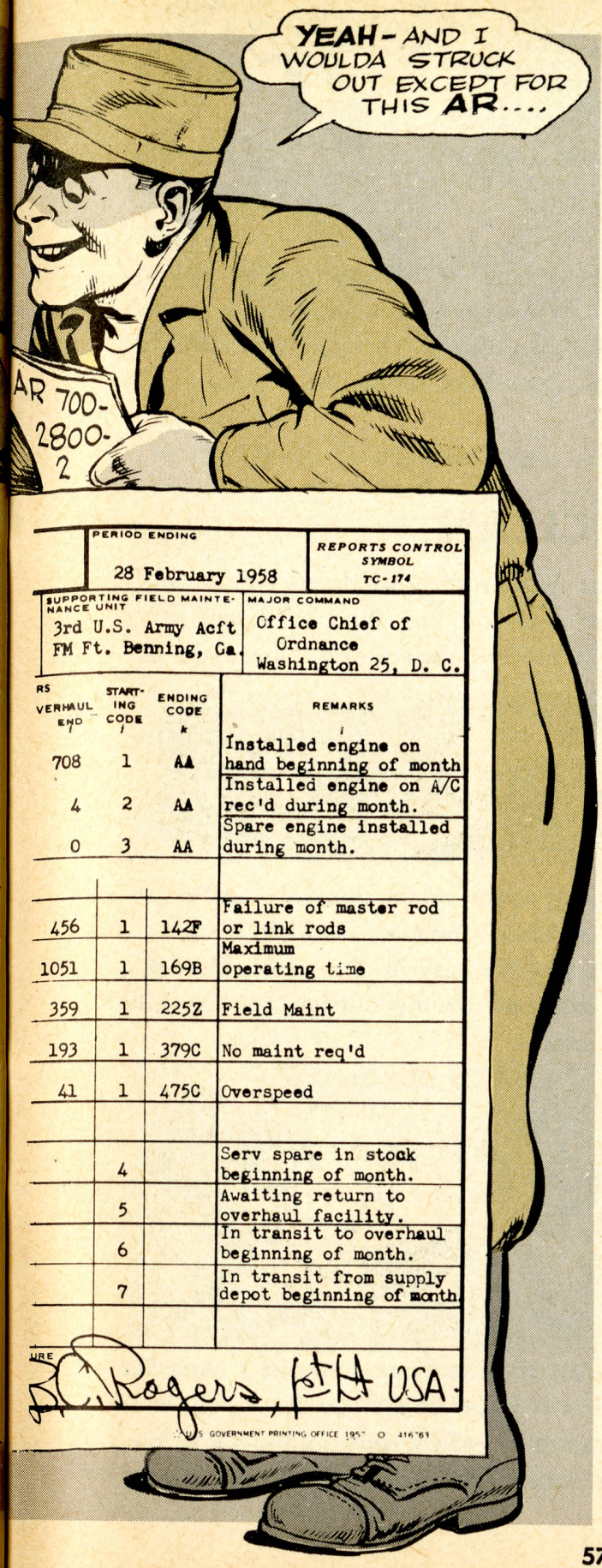
Say f'rinstance that one particular make and model of engine turns out to be a leetle feeble in the reduction gear section of the propeller. Not bad enough to bring down a storm of UER's, but just bad enough that a good percentage of the ending codes come in with 1D, 1E, or other 1- endings.

Believe it, very shortly the manufacturer's slip-stick boys are going to get off their ends and start working up a better prop section. So it may be that your next replacement engine will be a better engine than the one you take out. Which gives you a better chance at fogey pay.

But if you goof, and don't take care to get the right codes on the forms, the slip-stick boys may be chasin' shadows

in the accessory case, because you were using 4- endings insteada 1-. And the best redesign of an accessory case won't keep the fan turning if the problem was in the front end. It's up to you—you're ridin' 'em.

This form 1890 isn't difficult to fill out, but you won't get far unless you keep your copy of AR 700-2800-2 right with you, particularly the appendices where the codes are listed, while you work. And here's another point...



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SUPPORTING FIELD MAINTENANCE UNIT: 3rd U.S. Army Acft FM Ft. Benning, Ga.

MAJOR COMMAND: Office Chief of Ordnance Washington 25, D. C.

RS OVERHAUL END	STARTING CODE	ENDING CODE	REMARKS
708	1	AA	Installed engine on hand beginning of month
4	2	AA	Installed engine on A/C rec'd during month.
0	3	AA	Spare engine installed during month.
456	1	142F	Failure of master rod or link rods
1051	1	169B	Maximum operating time
359	1	225Z	Field Maint
193	1	379C	No maint req'd
41	1	475C	Overspeed
	4		Serv spare in stock beginning of month.
	5		Awaiting return to overhaul facility.
	6		In transit to overhaul beginning of month.
	7		In transit from supply depot beginning of month.

URE: R. C. Rogers, 1st Lt USA

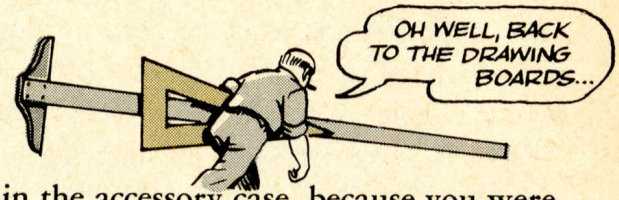
U.S. GOVERNMENT PRINTING OFFICE 195? O 416763

And the numbers aren't all. Those starting and ending codes are just as important, mebby more so from a safety angle. On accounta they give the "supply wheels" a good check on the engine design and the overhaul people.

Say f'rinstance that one particular make and model of engine turns out to be a leetle feeble in the reduction gear section of the propeller. Not bad enough to bring down a storm of UER's, but just bad enough that a good percentage of the ending codes come in with 1D, 1E, or other 1- endings.

Believe it, very shortly the manufacturer's slip-stick boys are going to get off their ends and start working up a better prop section. So it may be that your next replacement engine will be a better engine than the one you take out. Which gives you a better chance at fogey pay.

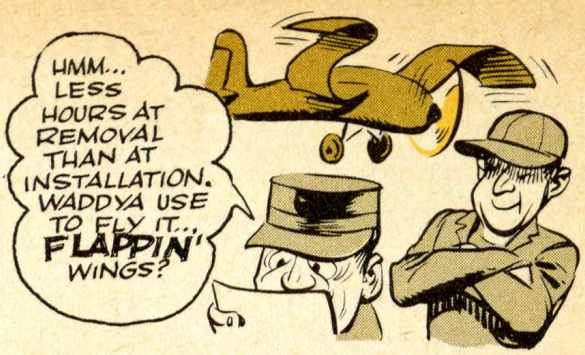
But if you goof, and don't take care to get the right codes on the forms, the slip-stick boys may be chasin' shadows



in the accessory case, because you were using 4- endings insteada 1-. And the best redesign of an accessory case won't keep the fan turning if the problem was in the front end. It's up to you—you're ridin' 'em.

This form 1890 isn't difficult to fill out, but you won't get far unless you keep your copy of AR 700-2800-2 right with you, particularly the appendices where the codes are listed, while you work. And here's another point...

Smart outfits get extra copies of this AR (on the "need to know" basis called for in the distribution formula) so that the engineering officer and the record keepers can have 'em right in their sweaty little hands while filling out the required reports.

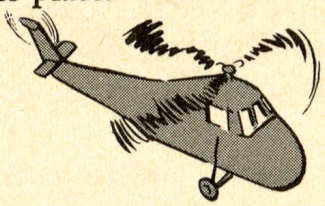


Remember again: This is a beautiful theory, and it will work just as well as you make it work. So get the right dope into those columns. Let's not have any more of these interesting forms that show less hours on the engine at removal than there were at installation—you didn't fly it **backwards**, did you?

Arright, Joe—

KEEP IT CLEAN

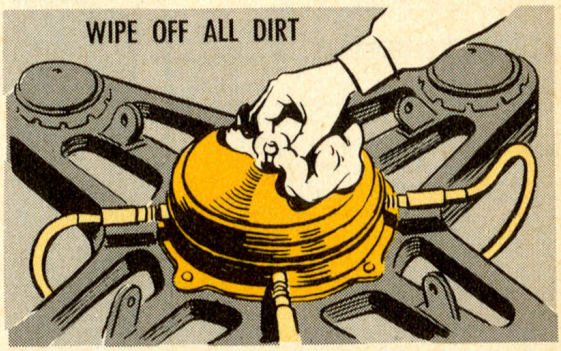
Not the story... the hydraulic oil in your main rotorhead damper fluid tank. Cases are known where dirt has found its way into this fluid tank, and then through the hoses to the dampers... where it chews up the seals until internal leakage takes place.



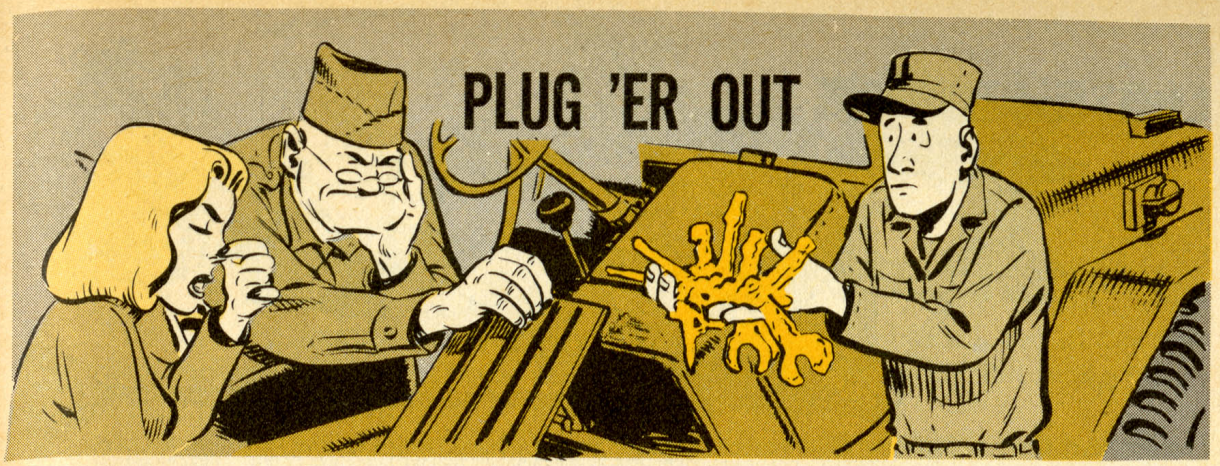
This, of course, cuts down on the damping action of the dampers, and possibly causes low frequency vibrations and associated faulty operational results.

So, this dirt has to come from somewhere—it wasn't in there when they put the rotorhead together. The only place it can come from is outside, and the only time it can get in is when you service the tank.

Which leaves it right in your lap—nobody else's. But it's not hard to keep outa trouble. All you gotta do is be real careful and clean when you open the tank for servicing. Wipe off all the dirt, grease, dust, false teeth and broken thundermugs you find around the filler before you open up.

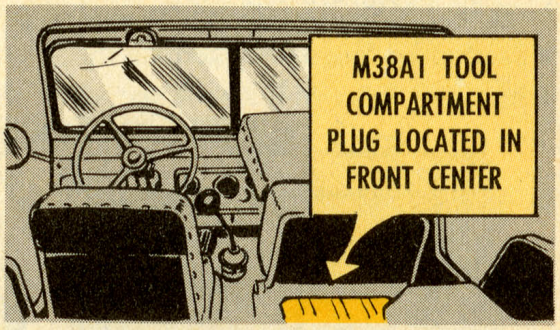


And be sure you're using clean hydraulic oil outa clean containers. Another thing—don't service the dampers with dust blowin' unless you absolutely have to; and don't leave open hydraulic oil cans around where dust can blow into 'em. Naturally, you clean the outside of the can before opening it, just like you cleaned the fluid tank.

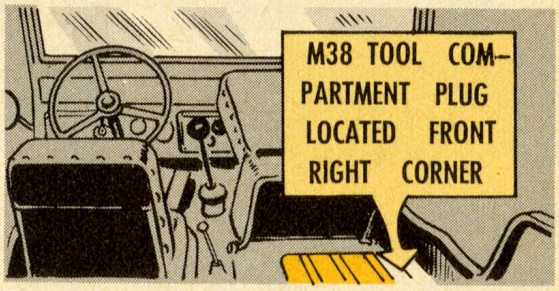


Came across a few Jeeps with rusted-out tool compartments—and you should've seen those tools!

The trouble comes when a driver doesn't realize that there's a drain plug in the compartment, which has to be taken out every so often to let water drain out.



On your M38A1's, that drain plug is stuck in the center of that tool compartment under the seat—it's right up forward. If you don't pull that plug every so often, plenty of water stashes itself in the compartment and you can figure what happens. So, get it out and drain the compartment—then, wipe the moisture from those tools and treat them like para 276 of TM 9-8014 says to help stop rust.

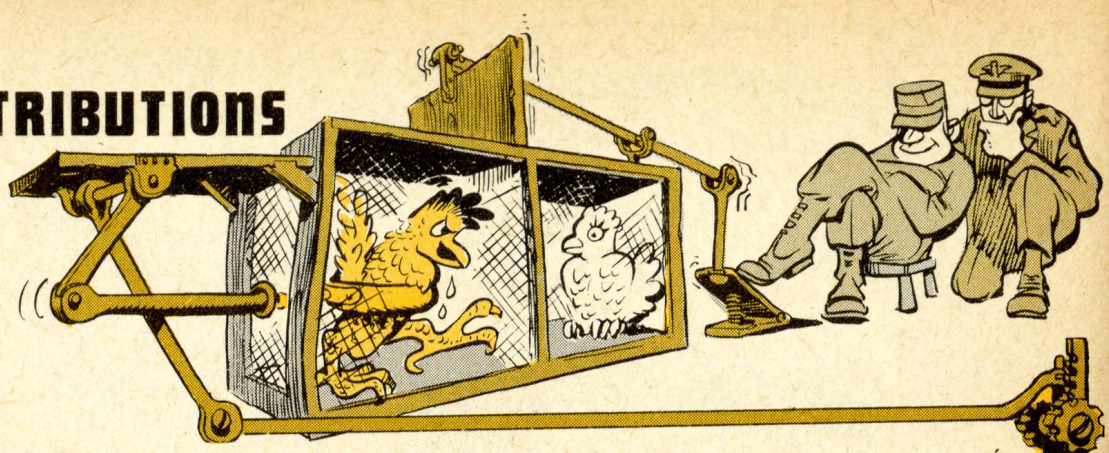


On your M38's, the plug is also up forward—but it's positioned over in the right-hand corner. So, even when you pull this plug, some water might still remain in the compartment. The thing to do when draining is to park your M38 on a slope, so the vehicle's tilting to the right. This'll push all the water to the right-hand corner and it'll slurp out. Then, wipe the tools dry and treat 'em for rust prevention like para 275 of TM 9-8012 says.

TAKE IT OFF

You say you just got a new G-742 series 2½-ton truck with the registration number on the door? You say it's causing you trouble because para 6c of AR 746-2300-1 (29 Dec 55) tells you to put that number on the hood? Tell you what you wanna do . . . take that cotton pickin' number off the door and re-stencil it on the hood. The AR is right.

CONTRIBUTIONS

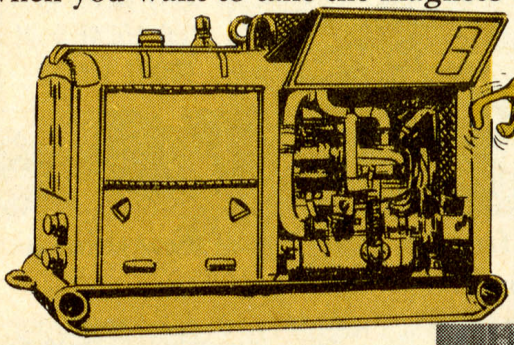


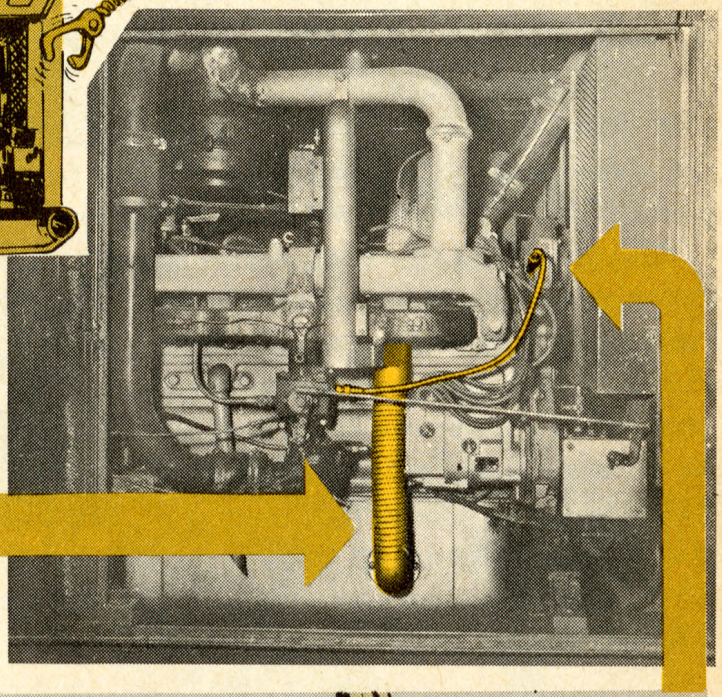
On Hobart Generators—

A SHUTOFF COCK DOES IT

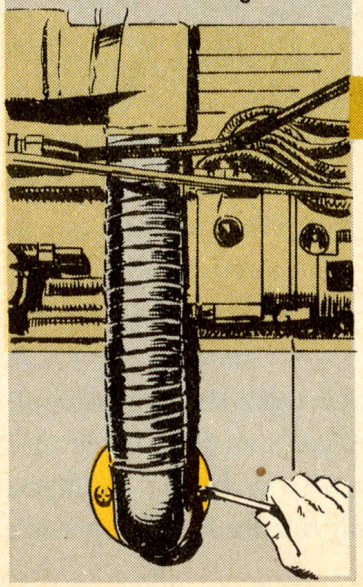
Dear Editor,

Here's one for Hobart generator sets, Models HF 30G and HF 30GM, which have had MWO 5-5072-3 applied to prevent carburetor icing. When you've got a Fairbanks-Morse magneto on them, and a round heater duct, you've got troubles when you want to take the magneto off for lubrication or timing.

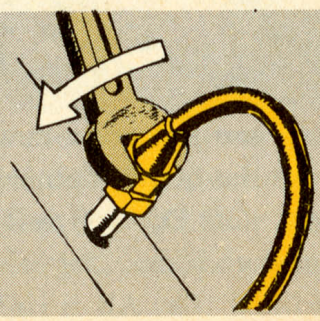




The round heater duct has to be taken off so you can take off the mag.

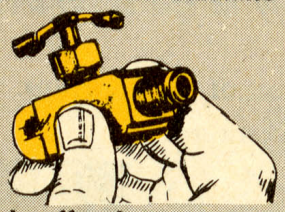


And, before you get the duct off, the copper tubing running from the carburetor de-icer to the water pump has to come off. The tubing is part of MWO 5-5072-3.

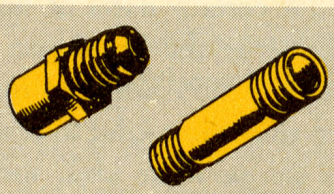


The way the setup is now, most of the coolant has to be drained before the copper tubing comes off because there's a hole in the water pump casting when you take off the tubing.

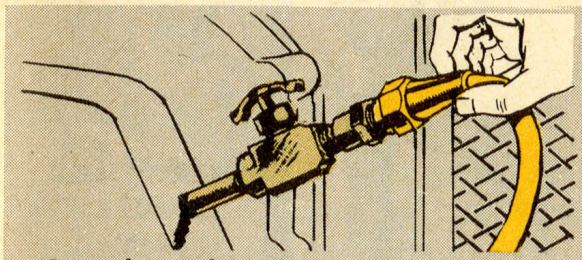
THIS FIX DOES AWAY WITH DRAINING THE COOLANT—



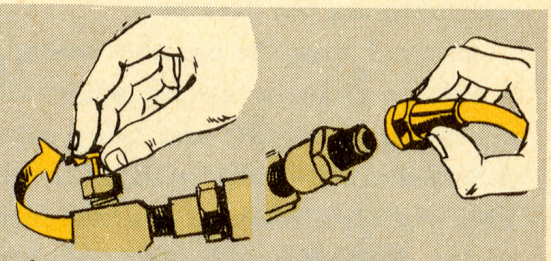
Just put a shutoff cock (FSN 4820-277-1756) on the copper tubing where it goes in the water pump casting.



(Or, use any shutoff valve that's 1/4-in NPT to 3/8-in OD copper tubing.) You also need the nipple and flare adapter that came with the MWO.



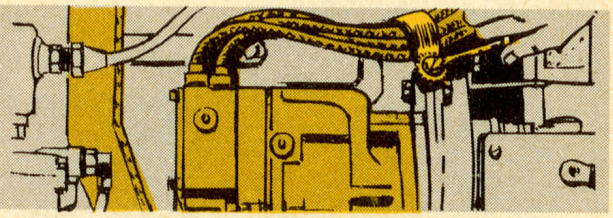
Screw the nipple in the water pump casting, and screw the shutoff cock on the nipple. Attach the copper tubing to the flare adapter, and she's all set to go.



When you pull the mag, close the shutoff valve and you won't have to drain the coolant. Just unscrew the copper tubing at the flare adapter.

Don't forget to open the shutoff valve after reassembling. Remember that the shutoff valve is always open when the generator's operating.

If your Hobart has a square heater duct, you don't need this shutoff cock fix. Take the clamps off the wiring and there's enough room to work the mag out.



There's one other situation where you won't need this fix. That's when the magneto is another make that's small enough to clear the round heater duct when you take it out.

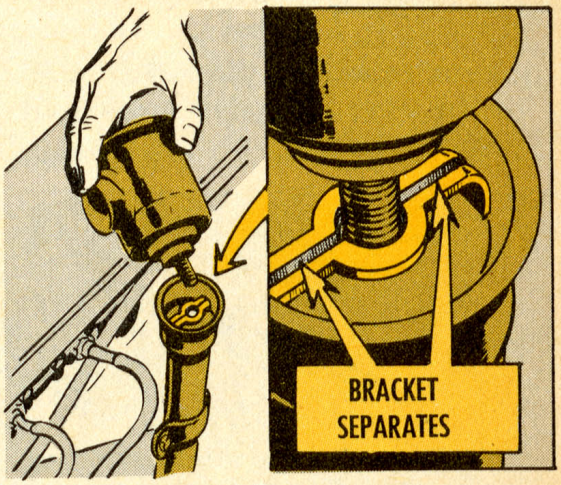
Carl F. Brown
Camp Kilmer, N. J.

Dear Editor,

There are certain parts of an engine where a little gimmick may pay off. One of these is the crankcase breather assembly of the G749-series 2½-ton trucks and the M59 armored infantry vehicle.

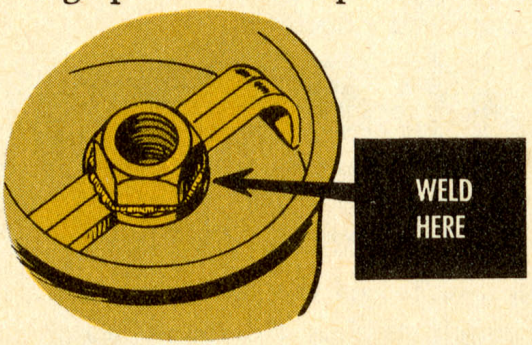
To keep this thing solid so it wouldn't vibrate out of its moorings, we've come up with a simple-to-do idea, and all it takes is a ¼-in nut.

Of course, this gimmick isn't needed unless the threads in the filler tube bracket become stripped or worn-out, which could happen just by removing and replacing the breather.



As you know, the breather assembly is held in place by a long screw coming down its middle and tying into a threaded bracket affair in the filler tube. This bracket is made of just two pieces of soft, threaded steel; it's anchored to the sides of the filler tube.

Seeing that the breather has to be screwed and unscrewed for lube order service every 1,000 miles, this bracket may get fouled up. The threads get worn and distorted so the bolt no longer fits snugly and, eventually, the two pieces of metal making up the bracket separate.



To firm up that holding area, all we did was weld a ¼-in nut, which is the same size as the bracket's threads, right on top of the bracket's hole—the hole into which the long screw is screwed. Now, you have a stronger nut holding that breather instead of the weaker bracket.

One word of caution: Before you do any welding inside that filler tube, take it off the engine to keep sparks and slag away from the crankcase.

Oscar V. Strickland
Anniston Ordnance Depot

Dear Editor,

Quartermaster MWO 10-702-1, Para 2a(6), calls for steel .0478 inch thick. Giving a standard gage number too would sure make it easier to get the metal. Not everyone knows the decimal equivalents of sheet metal gages. In this case it would be 18-gage.

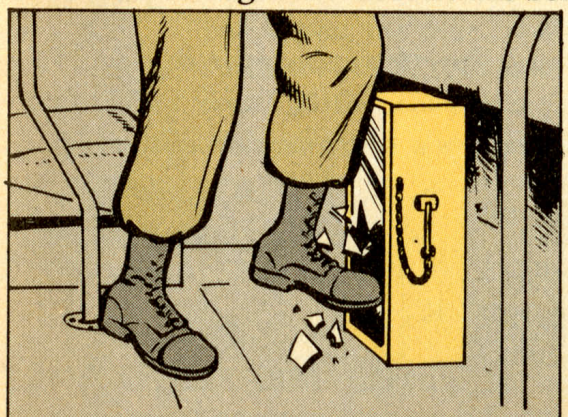
CWO Harold I. Gauthier
Louisiana National Guard

(Ed Note—You're right. I agree with you; and so do the QM people. They say the omission was a typographical error which has been corrected by including the gage numbers in Change 1 (April 1958). They'll also give sheet metal gage number as well as thickness when it's needed in the future. Thanks for the suggestion.)

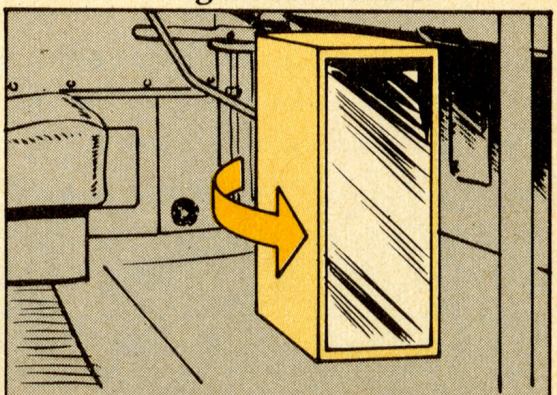
TINKLE

Dear Editor,

Ever since we got those new 37-passenger Dodge buses, there's been more glass breaking around here than on New Year's Eve. It's those glass windows on the fire-extinguisher and fire-axe box that're causing all the trouble.



The box is located in an upright position at the front of the passenger aisle, with the glass facing the aisle. When passengers start piling off the bus, they have to turn 90 degrees. A misplaced clodhopper and you've got a job for the glass man.

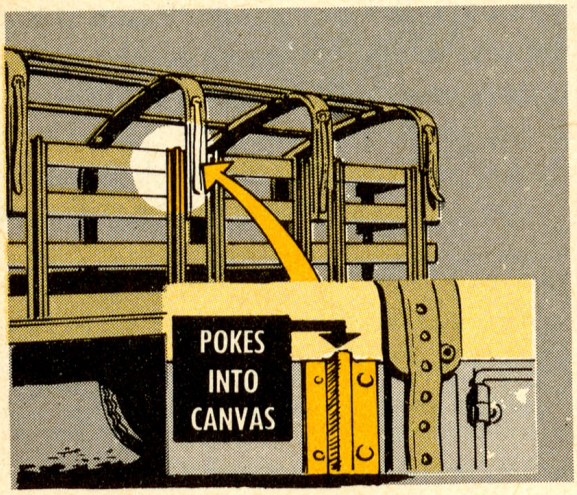


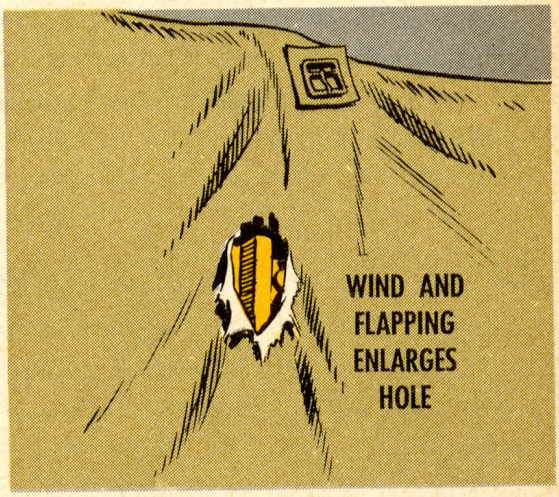
All we did was rotate the box 90 degrees, so that the glass faces the exit door. Now, if a man slips his foot in the wrong place, it'll hit the metal side of the box instead of the glass, and there'll be no damage. The driver can still get at the box to open it without any trouble.

AND HERE'S ANOTHER ONE:

424 CANVAS CUSHION

As you know, the tarps and bows for the GMC Model 424 2½-ton stake and platform trucks don't come with the trucks from the factory, but are bought from other suppliers. The kit covers the truck all right, but the top of the steel stakes and the section locks are knobby, and poke into the canvas.



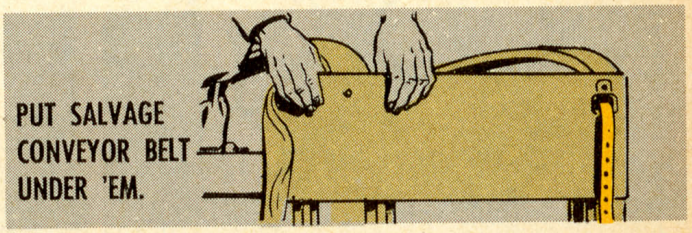


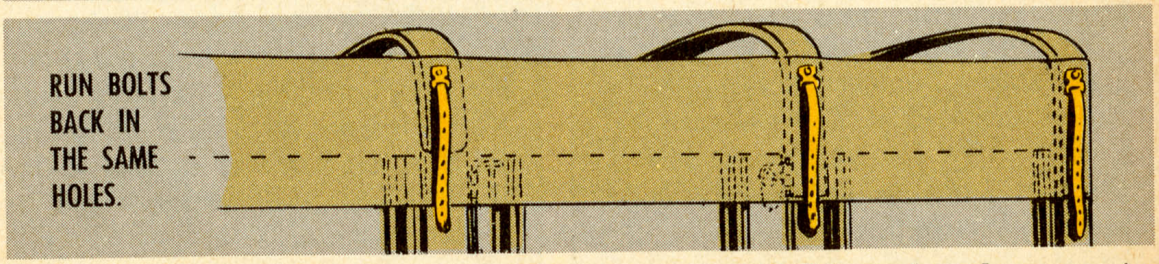
In a short time it wears through, and of course the wind and flapping spreads the holes. Pretty soon the canvas is shot.

I suggest that these sharp projecting points ought to be covered some way. Possibly the section locks could be moved to the inside of the stake sections.

Ellwood W. Hagen
Ft. Niagara, N. Y.

(Ed Note—One possibility is to put a salvage length of conveyor belt up there. It can be fastened by taking off the straps, putting the belting under 'em, and running the bolts back in the same holes. This way you don't need to drill any holes





or change the truck in any way. Also you can't see the belting when the canvas is down. Or cement sponge rubber on each side of the steel stakes.)

Connie Rodd's BRIEFS

Hot dope

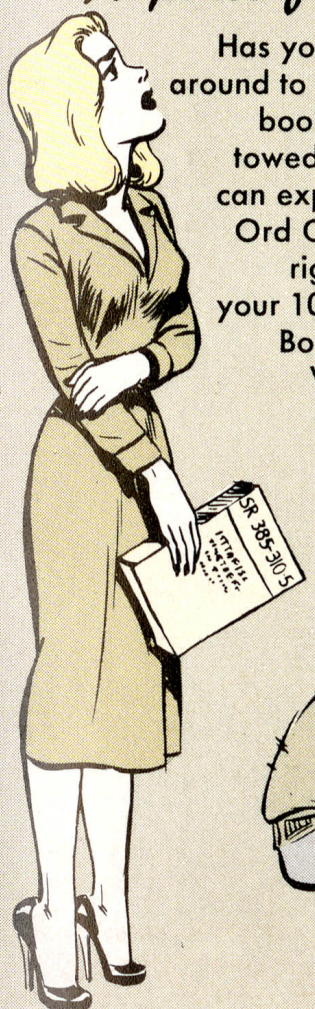
Two new regs coming your way are sure to hit the spot: AR 750-5 (28 Oct 57) Maintenance of Supplies and Equipment, and AR 58-5 (29 Oct 57) Motor Transportation. Get 'em.

Tape stays on

Makes good sense to leave the tape on your grenade containers until you're ready to use 'em. Then, if you pick one up by the top, the bottom won't slide off —letting your grenade hit the deck.

A place for your book

Has your support unit been around to see you about a gun book container for your towed field artillery? You can expect the man. MWO Ord C21-W23 tells him to rig up a container for your 105's Weapon Record Book. MWO Ord C39-W16 does the same thing for the 155.



Plugs popping?

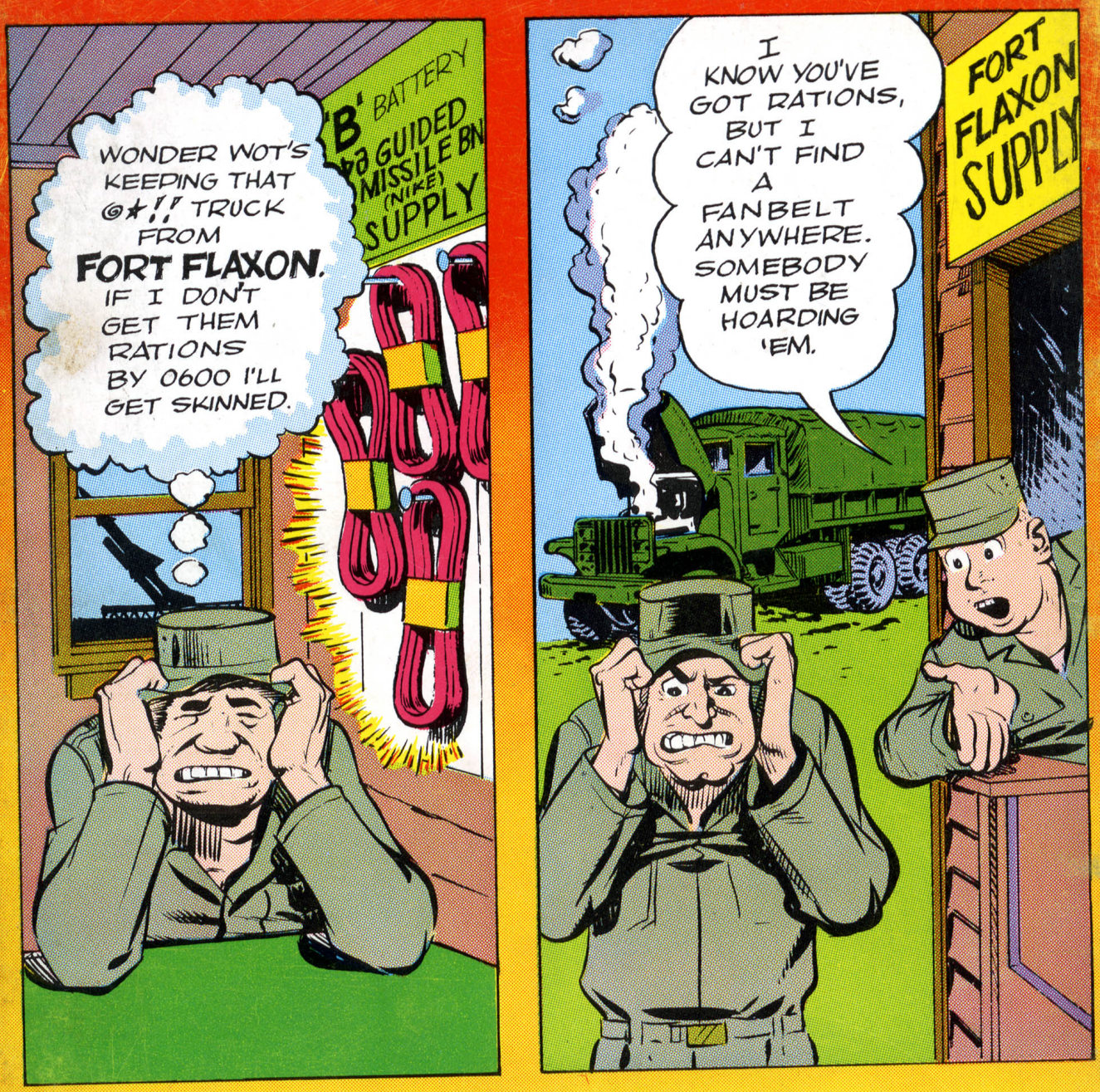
Havin' trouble puttin' the plugs in your pneumatic sleeping mattresses—and keeping them there? The cure is simple. Try moistening them a little. That moisture makes 'em slide in easier, and then helps to keep 'em there.

It's not your job

It's OK to want to keep the vent bushings on recoilless rifles clean. But don't do the job on yours—whether it's the M40A1 106-mm, the M27A1 105-mm or the M20 75-mm recoilless shooter. The nearest guy to you with the tools to remove the bushing is the man in your support unit.

Cool cover!

You guided missile fuel handlers can keep cool in the hottest weather with those terry cloth, water-evaporation coveralls and hoods. They're part of your protective clothing wardrobe. Just slip 'em on over the rest of the outfit . . . spray the water on . . . and cool off. Might check TB 10-277 or SM 10-1-8415 for sizes, numbers, etc.



NEVER HOARD SPARE PARTS

...SOMEBODY ELSE MAY NEED THEM!